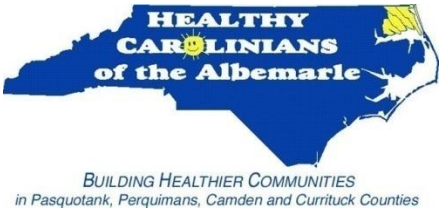
Albemarle Regional Health Services and
Albemarle Health

2013 Pasquotank County Community Health Assessment

May, 2013



Community Health Assessment funding provided by:

Albemarle Regional Health Services

Albemarle Health

The Outer Banks Hospital

Vidant Bertie Hospital

Vidant Chowan Hospital

May 2013

Dear Community Member,

Thank you for taking the time to review the 2013 Community Health Assessment for our area. Albemarle Regional Health Services and Albemarle Health are proud to partner and provide this comprehensive report which illustrates the health status, health needs and improvements, as well as health resources in our community. This document represents months of diligent work by health department staff, hospital staff, and community members like you.

We have continued to work together throughout the past several years to develop and implement strategies to target needs identified in the **2010** CHA process. These efforts have resulted in more positive health outcomes in our communities and we are pleased to include areas of improvement in this report.

Moving forward, we will use this report to guide us in developing and implementing strategies and engaging partners to address the current needs identified in the 2013 process.

We would like to thank each person, organization, and agency that has helped with this process. The health of a community starts with you.

Best of health,

Jerry L. Parks, MPH
Health Director
Albemarle Regional Health Services

Wick Baker
President
Albemarle Health

ACKNOWLEDGMENTS

The Community Health Assessment (CHA) process requires much work and dedication from those who are committed to identifying and solving health problems within our communities to improve the quality of life for our residents. The first phase of this process is forming a CHA Leadership Team. It is essential that the CHA Team involve people who have significant influence in the county, as well as the people who are most affected by health problems. People from throughout the county must be mobilized during this process, therefore a broad representation of county residents, agencies, and organizations were invited to be a part of this team.

Orientation Meeting, June 22, 2012
Pasquotank County Health Department, Elizabeth City

Attendance:

1. Lisa Spry, Albemarle Regional Health Services, Health Educator
2. Ashley Mercer, Albemarle Regional Health Services, Health Educator
3. Amanda Betts, Albemarle Regional Health Services, Healthy Carolinians of the Albemarle Coordinator
4. Robin Harris, College of the Albemarle, Division Chair - Health Sciences and Wellness Programs
5. Megan Booth-Mills, Vidant Bertie Hospital and Vidant Chowan Hospital, Director of Planning & Marketing
6. Toby Chappell, Gates County Manger
7. Frank Heath, Perquimans County Manager
8. Jill Jordan, Albemarle Regional Health Services, Health Education Director and Public Information Officer
9. Christine Ransdell, Albemarle Regional Health Services, Regional Coordinator for NC Heart Disease & Stroke Prevention Program
10. Wesley Nixon, Albemarle Regional Health Services, Environmental Health Specialist
11. Juanita Johnson, Albemarle Health, Case Manager for Community Care Clinic
12. Leah Mayo, Albemarle Regional Health Services, Community Transformation Grant Project
13. Kim Ruiz, Albemarle Regional Health Services, Community Transformation Grant Project
14. Yvonne Mullen, Pasquotank Cooperative Extension Agent, Family and Consumer Sciences
15. Amy Underhill, Albemarle Regional Health Services, Health Promotion Coordinator and Healthy Carolinians of the Albemarle Chair
16. Fannie Parker, Bertie County EMPOWER! Diabetes Program
17. Joanna Rascoe
18. Dana Hamill, Albemarle Regional Health Services, Lead Regional CHA Coordinator and Health Educator
19. Arina Boldt, Albemarle Health, Manager of Healthy Communities
20. Pam Etheridge, Albemarle Health, Community Health Nurse
21. Bonnie Brown, Albemarle Health, Health Promotion Coordinator

Primary Data Collection Plan Meeting, August 31, 2012
Pasquotank County Health Department, Elizabeth City

Attendance:

1. Dana Hamill, Albemarle Regional Health Services, Lead Regional CHA Coordinator and Health Educator
2. Donna Godfrey, Perquimans County, Planning and Zoning
3. Lisa Spry, Albemarle Regional Health Services, Health Educator
4. Brigit Schultz, College of the Albemarle, Nursing Student
5. Fannie Parker, Bertie County EMPOWER! Diabetes Program
6. Robin Harris, College of the Albemarle, Division Chair - Health Sciences and Wellness Programs
7. Kim Ruiz, Albemarle Regional Health Services, Community Transformation Grant Project
8. Shirley Taylor, Bertie County EMPOWER! Diabetes Program
9. Wes Gray, Albemarle Regional Health Services, Community Transformation Grant Project
10. Megan Booth-Mills, Vidant Bertie Hospital & Vidant Chowan Hospital, Director of Planning & Marketing
11. Beverly Venters, Vidant Chowan Hospital, Nurse
12. Amanda Betts, Albemarle Regional Health Services, Healthy Carolinians of the Albemarle Coordinator
13. Yvonne Mullen, Pasquotank Cooperative Extension Agent, Family and Consumer Sciences
14. Tanya Miller, Albemarle Health, Stroke Program Coordinator
15. Amy Underhill, Albemarle Regional Health Services, Health Promotions Coordinator and Healthy Carolinians of the Albemarle Chair
16. Dana Boslau, Albemarle Regional Health Services, Director of Nursing
17. Nancy Morgan, Albemarle Regional Health Services, Three Rivers Healthy Carolinians Coordinator
18. Jill Jordan, Albemarle Regional Health Services, Health Education Director and Public Information Officer
19. Ashley Stoop, Albemarle Regional Health Services, Preparedness Coordinator
20. Sylvia Boone, Albemarle Health, Case Manager for Community Care Clinic
21. Juanita Johnson, Albemarle Health, Case Manager for Community Care Clinic
22. Bonnie Brown, Albemarle Health, Health Promotion Coordinator
23. Arina Boldt, Albemarle Health, Manager of Healthy Communities
24. Pam Etheridge, Albemarle Health, Community Health Nurse
25. Christine Ransdell, Albemarle Regional Health Services, Regional Coordinator for NC Heart Disease & Stroke Prevention Program
26. Amy Montgomery, The Outer Banks Hospital, Director, Community Outreach (via conference call)
27. Wesley Nixon, Albemarle Regional Health Services, Environmental Health Specialist

Primary Data Collection Plan Meeting, October 5, 2012
Pasquotank County Health Department, Elizabeth City

Attendance:

1. Yvonne Mullen, Pasquotank Cooperative Extension Agent, Family and Consumer Sciences
2. Esther Lassiter, Albemarle Regional Health Services, Gates Partners for Health Coordinator
3. Dana Hamill, Albemarle Regional Health Services, Lead Regional CHA Coordinator and Health Educator
4. Arina Boldt, Albemarle Health, Manager of Healthy Communities

5. Crystal Terry, Elizabeth City State University, Adjunct Professor in the Department of Health and Physical Education
6. Brent Jones, Bertie Recreation Department, Recreation Program Coordinator
7. Megan Booth-Mills, Vidant Bertie Hospital and Vidant Chowan Hospital, Director of Planning & Marketing
8. Nancy Morgan, Albemarle Regional Health Services, Three Rivers Healthy Carolinians Coordinator
9. Ashley Stoop, Albemarle Regional Health Services, Preparedness Coordinator
10. Tanya Miller, Albemarle Health, Stroke Program Coordinator
11. Wesley Nixon, Albemarle Regional Health Services, Environmental Health Specialist

Pasquotank County Community Health Opinion Survey Training, October 16, 2012
Owens Center, College of the Albemarle, Elizabeth City
Matt Simon

In Attendance:

1. Wendy Ward, College of the Albemarle, Student
2. Oksana Karitskaya, College of the Albemarle, Student
3. Amanda Easley, College of the Albemarle, Student
4. Patricia Mountjay, College of the Albemarle, Student
5. Yvonne Mullen, Pasquotank Cooperative Extension Agent, Family and Consumer Sciences
6. Lindy Cartwright, College of the Albemarle, Student
7. Heather Lawrence, East Carolina University, Graduate Student
8. Gayle Olson, Albemarle Regional Health Services, Asthma Nurse
9. Wes Gray, Albemarle Regional Health Services, Community Transformation Grant Project
10. Amy Underhill, Albemarle Regional Health Services, Health Promotion Coordinator and Healthy Carolinians of the Albemarle Chair
11. Ashley Mercer, Albemarle Regional Health Services, Health Educator
12. LaDonna Maddy, East Carolina University, Graduate Student
13. Jeremy Whitaker, Albemarle Health, Administrative Resident
14. Ashley Stoop, Albemarle Regional Health Services, Preparedness Coordinator
15. Juanita Johnson, Albemarle Health, Case Manager for Community Care Clinic
16. Timothy Brown, Albemarle Regional Health Services, Teen Tobacco
17. Robin Harris, College of the Albemarle, Division Chair - Health Sciences and Wellness Programs
18. Amanda Betts, Albemarle Regional Health Services, Healthy Carolinians of the Albemarle Coordinator
19. Meredith Umphlett, Albemarle Regional Health Services, AgriSafe Nurse
20. Leslie Walters, College of the Albemarle
21. Monica Hassell, College of the Albemarle, Nursing Student
22. Alexis Edwards, College of the Albemarle, Nursing Student
23. Julie White, College of the Albemarle, Nursing Student
24. Amanda Jenkins, College of the Albemarle, Nursing Student
25. Sharon Brookins, College of the Albemarle, Nursing Student
26. Liz Watson, University of North Carolina, Graduate Student
27. Shenika Outlaw
28. Holly Cook-Ward, Elizabeth City YMCA
29. Ginger Badgley, College of the Albemarle
30. Taylor Collins, College of the Albemarle
31. Pablo Trevino, College of the Albemarle

32. Wendy Pierce, Albemarle Health, Director of Grants Management and Special Projects
33. Kelli Scott, Albemarle Health, Nurse Manager – 2South
34. Tamara Pace, College of the Albemarle, Nursing Student
35. Brigit Schultz, College of the Albemarle, Nursing Student
36. Sara Van Horn, College of the Albemarle, Medical Assisting Student
37. Alex Bundy, College of the Albemarle, Nursing Student
38. Vanessa Nixon, College of the Albemarle, Nursing Student
39. Andrea Fulcher, College of the Albemarle, Nursing Student
40. Rebecca Trueblood, College of the Albemarle, Nursing Student
41. Tammy Wood, College of the Albemarle, Nursing Student
42. Shelly Williams, College of the Albemarle, Nursing Student
43. Lisa Bunch, College of the Albemarle, Nursing Student
44. Lynn Mathis, North Carolina Department of Environment and Natural Resources, Division of Coastal Management Environmental Specialist (CAMA)
45. Nancy Stevens, College of the Albemarle, Nursing Student
46. Melissa Rawlins, College of the Albemarle, Nursing Student
47. Kimberly Ruiz, Albemarle Regional Health Services, Community Transformation Grant Project
48. Chris Odom, Albemarle Health, Clinical Engineer Supervisor
49. Tanya Miller, Albemarle Health, Stroke Program Coordinator
50. Lisa Spry, Albemarle Regional Health Services, Health Educator
51. Steve Fecker, College of the Albemarle
52. Brenda Tevepaugh, College of the Albemarle, Nursing Student
53. Dana Hamill, Albemarle Regional Health Services, Lead Regional CHA Coordinator and Health Educator
54. Jill Jordan, Albemarle Regional Health Services, Health Education Director and Public Information Officer

Special thank you to Robin Harris, College of the Albemarle, Division Chair - Health Sciences and Wellness Programs for securing the meeting location, videoing the initial training, and recruiting students to volunteer to conduct surveys. A big thank you to the College of the Albemarle student volunteers that helped with this process!

October 16, 2012 - Pasquotank Survey Volunteers:

-Vanessa Nixon/Andrea Fulcher
-Wes Gray/Meredith Umphlett
-Jill Jordan/Liz Watson
-Tim Brown/Kimberly Ruiz
-Ashley Mercer/Amanda Easley
-Sharon Brookins/Brigit Schultz
-Amy Underhill/Lindy Cartwright
-Julie White/Amanda Jenkins
-Tamara Pace/Sara Van Horn
-Lisa Spry
-Holly Cook-Ward/Alex Bundy
-Yvonne Mullen/Nancy Stevens
-Patricia Mountjoy/Alexis Edwards
Base Coverage - Dana Hamill, Wesley Nixon, Ashley Stoop

October 17, 2012 - Pasquotank Survey Volunteers:
-Liz Watson/Yvonne Mullen
-Wendy Pierce/Kelli Scott
-Gayle Olson/Meredith Umphlett
-Santina Proctor/Juanita Johnson
-Wes Gray
Base Coverage - Amy Underhill, Dana Hamill

October 18, 2012 - Pasquotank Survey Volunteers:
-Yvonne Mullen/Liz Watson
-Ashley Mercer/Tanya Miller
-Amy Underhill/Wes Gray
Base Coverage - Dana Hamill, Amy Under hill, Wesley Nixon

October 19, 2012 - Perquimans Survey Volunteers:
-Wendy Pierce/Kelli Scott
-Ashley Mercer/Amy Underhill
-Lisa Spry/Tim Brown
-Lisa Spry/Dana Hamill
Base Coverage - Dana Hamill, Ashley Stoop

October 20, 2012 - Perquimans Survey Volunteers:
-Robin Harris/Lynn Mathis
Base Coverage - Jill Jordan, Ashley Stoop, Dana Hamill

October 22, 2012 - Camden Survey Volunteers:
-Ashley Mercer/Tim Brown
-Wes Gray/Meredith Umphlett
-Ashley Mercer/Yvonne Mullen
Base Coverage – Dana Hamill

October 23, 2012 - Camden Survey Volunteers:
-Meredith Umphlett/Heather Lawrence
Base Coverage – Amy Underhill, Lisa Spry

October 24, 2012 - Camden Survey Volunteers:
-Taylor Collins/Rebecca Trueblood
-Ashley Mercer/Tim Brown
-Tanya Miller/Heather Lawrence
-Wes Gray/Meredith Umphlett
-Yvonne Mullen/Tim Brown
Base Coverage – Dana Hamill, Wesley Nixon, Ashley Stoop

October 26, 2012 - Pasquotank Survey Volunteers (Catch-up Day):
-Amy Underhill/Ashley Stoop

November 3, 2012 - Perquimans Survey Volunteers (Catch-up Day):
-Dana Hamill/Lisa Spry

November 6, 2012 - Camden Survey Volunteers (Catch-up Day):
-Amy Underhill/Lisa Spry

November 8, 2012 - Camden Survey Volunteers (Catch-up Day):
-Amy Underhill/Gayle Olson

December 5, 2012 - Camden Survey Volunteers (Catch-up Day):
-Amy Underhill/Amanda Betts
Yvonne Mullen/Cierra
-Yvonne Mullen/Danielle Barco

December 6, 2012 - Camden Survey Volunteers (Catch-up Day):
-Yvonne Mullen/Danielle Barco
-Amy Underhill/Ashley Stoop

December 6, 2012 - Perquimans Survey Volunteers (Catch-up Day):
-Ashley Mercer/ Wes Gray

December 7, 2012 - Camden Survey Volunteers (Catch-up Day):
-Wes Gray/Leah Mayo

December 7, 2012 - Perquimans Survey Volunteers (Catch-up Day):
-Lisa Spry/Meredith Umphlett

Currituck County Community Health Opinion Survey Training, November 1, 2012
Currituck County Health Department
Video of Initial Training conducted by Matt Simon

In Attendance:
None

Currituck County Survey Volunteers:
Nov 1 - Wes Gray and Amy Underhill
Nov 2 - Amanda Betts and Yvonne Mullen
-Olivia Jones and Barbara Courtney
-Lisa Spry and Amy Underhill
Nov 13 - Amy Underhill & Olivia Jones
Dec 5 - Olivia Jones and Juanita Johnson
Dec 6 - Amanda Betts and Barbara Courtney

December 12, 2012 - Perquimans Survey Volunteers (Catch-up Day):
-Wes Gray/Leah Mayo

December 13, 2012 - Camden Survey Volunteers (Catch-Up Day):
-Wes Gray/Leah Mayo

December 18, 2012 - Camden Survey Volunteers (Catch-up Day):
-Amy Underhill/Danielle Barco

The Outer Banks Hospital Survey Volunteers for Currituck County:
-Amy Montgomery, Community Outreach Director
-Marie Neilson, Hands of Hope Volunteer Coordinator
-Debra Johnson, Director of Imaging, Rehabilitation, Laboratory, Cardiopulmonary
-Bob Bersack, OBH Volunteer

Albemarle Health Survey Volunteers for Currituck County:
-Josh Hammond, Manager of Cardiopulmonary Services
- Anna Meads, Quality Manager
-Richard Munden, Director of Security
-Jamie Pierce, Technical Manager
-Sharon McCarty, Director of Materials Management

Perquimans County Community Health Opinion Survey Training, November 7, 2012
211 Market St House, Hertford
Matt Simon

In Attendance:
-Kristy Worrell, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager - Rehab Services
-Tonya Williams, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager - Radiology
-Hunter Baltzglier, Vidant Bertie Hospital & Vidant Chowan Hospital, Wellness Coordinator
-Brian White, Vidant Bertie Hospital & Vidant Chowan Hospital, Director of Support Services
-Mona Hughes, Vidant Bertie Hospital, Manager - Quality Resources
-Josh Hammond, Albemarle Health, Manager of Cardiopulmonary Services

November 7, 2012 - Perquimans Survey Volunteers:
-Kristy Worrell/Tonya Williams
-Hunter Baltzglier/ Brian White
-Mona Hughes/Josh Hammond
Base Coverage - Dana Hamill, Matt Simon, Wesley Nixon

Chowan County Community Health Opinion Survey Training, November 8, 2012
Vidant Chowan Hospital, Edenton
Matt Simon

In Attendance:
1. Brent Jones, Bertie Recreation Department, Recreation Program Coordinator
2. Stephanie Nugen, Vidant Bertie Hospital & Vidant Chowan Hospital, Clinical Dietician
3. Julie Keeter, Vidant Chowan Hospital, Manager – Nutrition Services
4. Randall Walston, Vidant Health, Chief of Police
5. Liz White, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager – Environmental Services
6. Chip Lanier, Vidant Chowan Hospital, Police Lieutenant
7. Elizabeth Lawrence, Vidant Chowan Hospital, Manager – Operating Room
8. Benita Webb, Vidant Chowan Hospital, Manager – Medical/Surgical Department
9. Kelly Cross, Vidant Chowan Hospital, Manager – Gift Shop/Volunteer Services
10. Beverly Venters, Vidant Chowan Hospital, Manager – Quality Resources
11. Megan Booth-Mills, Vidant Bertie Hospital & Vidant Chowan Hospital, Director of Planning & Marketing

12. Kathy Copeland, Bertie Cooperative Extension, Nutrition Program Assistant, EFNEP
13. Ginny Waff, Vidant Chowan Hospital, Executive Director of Vidant Chowan Hospital Foundation
14. Lynn S. Dale, Vidant Chowan Hospital, Manager – Case Management Services
15. Melissa Chappell, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager – Health Information Services
16. Kaili Nixon, Vidant Chowan Hospital, Manager – Emergency Department
17. Debbie Swicegood, Vidant Bertie Hospital & Vidant Chowan Hospital, Director – Human Resources
18. Cheryl Bembry, Vidant Bertie Hospital & Vidant Chowan Hospital, Controller
19. Alisa Perry, Vidant Chowan Hospital, Manager –Labor & Delivery/Nursery Department
20. Ella Coates, Vidant Chowan Hospital, Intensive Care Unit
21. Dana Byrum, Vidant Chowan Hospital, Ambulatory Surgery Units/Clinics/Transitional Care
22. Mary Morris, Bertie Cooperative Extension Agent, Family and Consumer Sciences
23. Nancy Morgan, Albemarle Regional Health Services, Three Rivers Healthy Carolinians Coordinator

November 8, 2012 - Chowan Survey Volunteers:
-Beverly Venters/Melissa Chappell
-Megan Booth-Mills/Lynn S. Dale
-Debbie Swicegood/Julie Keeter
-Liz White/Nancy Morgan
-Dana Byrum/Kaili Nixon
-Alisa Perry/Ella Coates
-Stephanie Nugen/Randy Watson
-Ginny Waff/Cheryl Bembry
-Chip Lanier/Kelly Cross
-Elizabeth Lawrence/Benita Webb
Base Coverage – Matt Simon, Dana Hamill

November 9, 2012 - Chowan Survey Volunteers:
-Debbie Swicegood/Julie Keeter
-Liz White/Nancy Morgan
-Kelly Cross/Brian White
-LaDonna Maddy/Wes Gray
-Megan Booth-Mills/Kaili Nixon
Base Coverage – Wesley Nixon, Dana Hamill

Bertie County Community Health Opinion Survey Training, November 12, 2012
Vidant Bertie Hospital, Windsor
Ashley Stoop

In Attendance:
1. Pat Taylor, Vidant Bertie Hospital, Director of Patient Care Services
2. Valerie Howell, Vidant Bertie Hospital, Supervisor – Patient Access Services
3. Judy Duke, Vidant Bertie Hospital, Manager – Operating Room
4. Renee White, Vidant Bertie Hospital, Manager – Emergency Department
5. Gaye Branch, Vidant Bertie Hospital, Manager – Respiratory Therapy
6. Renee Bryson, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager – Laboratory
7. Amy Bartley, Vidant Bertie Hospital, Supervisor – Health Information Services

8. Scott McDougal, Vidant Bertie Hospital, Police Lieutenant
9. LuAnn Joyner, Vidant Bertie Hospital, Marketing Specialist
10. Jeff Dial, Vidant Bertie Hospital & Vidant Chowan Hospital, VP of Operations
11. Mary Davis, Vidant Family Medicine - Windsor, Manager
12. Kenneth L. Stone, Vidant Bertie Hospital & Vidant Chowan Hospital, Manager – Plant Operations

November 12, 2012 - Bertie Survey Volunteers:
-Valerie Howell/Amy Bartley
-Scott McDougal/LuAnn Joyner
-Renee White/Gaye Branch
-Pat Taylor/Mary Davis
-Lisa Spry/LaDonna Maddy
-Kenny Stone/Megan Booth-Mills
-Wes Gray/Jeff Dial
Base Coverage – Ashley Stoop, Dana Hamill

November 13, 2012 - Bertie Survey Volunteers:
-Kapuaola Gellert/Mona Cai, University of North Carolina Graduate Students (viewed taped training)
-Brent Jones/Nancy Morgan
-Pat Taylor/Renee Bryson
-Judy Duke/Gaye Branch
-Kathy Copeland/Mary Morris
Base Coverage – Dana Hamill, Wesley Nixon

November 14, 2012 - Bertie Survey Volunteers:
-Kapuaola Gellert/Mona Cai/Wes Gray
-Brent Jones/Nancy Morgan
-Pat Taylor/Renee Bryson
-Judy Duke/Gaye Branch
-Kathy Copeland/Mary Morris
Base Coverage – Dana Hamill, Wesley Nixon

Gates County Community Health Opinion Survey Training, October 31, 2012
New Hope Missionary Baptist Church, Gates
Wesley Nixon

In Attendance:
1. Nancy Figgs, Community Volunteer
2. Ashley Taylor, Community Volunteer
3. Claude Odom, New Middle Swamp Missionary Baptist Church, Pastor
4. Fannie Langston, Gates Partners for Health, Eat Smart Move More Coalition Vice Chair
5. Susan H. Ward, T.S. Cooper Elementary School, Retired Principal
6. Katie Speight, Albemarle Regional Health Services, Social Worker II
7. Krystal Sanderson, Community Volunteer
8. Virginia P. Eure, Gates Partners for Health, Chronic Disease Committee Secretary
9. Margaret E. Smith, Community Volunteer
10. Shirley Smith, Community Volunteer
11. Dorothy Riddick, Community Volunteer

12. Della Freeman, Gates Partners for Health, Chronic Disease Committee Member
13. Melissa Harrison, Community Volunteer
14. Jacqueline B. Sears, Gates Partners for Health, Eat Smart Move More Coalition Member
15. T.D. Lassiter, Community Volunteer
16. Glendale P. Boone, Gates County Public Schools, Board Member
17. Bettie Mozell, Community Volunteer
18. Mary H. Boone, Community Volunteer
19. Shirley Johnson, Gates Partners for Health, Eat Smart Move More Coalition Member
20. Pamela Harvey, Down East Health & Rehabilitation Facility, Director
21. Fannie M. Spivey, Department of Social Services, Board Member
22. Maggie Beamon, Community Volunteer
23. Thelma Maxine Raysor, Gates Partners for Health, Chronic Disease Committee Member
24. Carolyn V. Wiggins, Retired School Teacher
25. Esther W. Lassiter, Albemarle Regional Health Services, Gates Partners for Health Coordinator
26. Patricia Boone, Community Volunteer

October 31, 2012 - Gates County Survey Volunteers:

-Susan Ward/Katie Speight
-Bettie Mozell/Fannie Spivey
-Meredith Umphlett/Maggie Beamon/ Thelma Maxine Raysor
-Virginia P. Eure/Margaret E. Smith
-Nancy Figgs/Della Freeman
-Dorothy Riddick/Shirley Smith
-Carolyn Wiggins/Glendale Boone
-Mary Boone/Shirley Johnson
-Esther Lassiter/Fannie Langston/Jacqueline Sears
-Pam Harvey/Melissa Harrison
-Claude Odom/Ashley Taylor
Base Coverage - Wesley Nixon, Dana Hamill

November 15, 2012 - Gates County Survey Volunteers:

-Mary Boone/Shirley Johnson
-Nancy Figgs/Della Freeman
-Katie Speight/Patricia Boone
-Lisa Spry/Nancy Morgan
-Dorothy Riddick/Bettie Mozell
-Esther Lassiter/Jaqueline Sears
-Nancy Figgs/Della Freeman
-Thelma Raysor/Thomas Lassiter
Base Coverage - Dana Hamill

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INTRODUCTION

Local public health agencies in North Carolina (NC) are required to conduct a comprehensive Community Health Assessment (CHA) at least once every four years. The CHA is required of public health departments in the consolidated agreement between the NC Division of Public Health (NC DPH) and the local public health agency. Furthermore, a CHA is required for local public health department accreditation through the NC Local Health Department Accreditation Board (G.S. § 130A-34.1). As part of the US Affordable Care Act of 2011, non-profit hospitals are also now required to conduct a community health (needs) assessment at least every three years. Recognizing that duplicate assessment efforts are a poor use of community resources, local health departments (LHDs) and non-profit hospitals across the state are developing models for collaboratively conducting the community health assessment process. For the Albemarle region, a partnership between Albemarle Regional Health Services and local hospitals has been a long-standing tradition, and the hospitals have helped fund and participate in previous community health assessments. This document is the culmination of the most recent partnership between Albemarle Regional Health Services (ARHS), Vidant Bertie Hospital (VBER), Vidant Chowan Hospital (VCHO), Albemarle Health (AH), and The Outer Banks Hospital (TOBH) for the 2013 Community Health Assessment.

In communities where there is an active Healthy Carolinians partnership, the CHA activity also usually includes that entity. Healthy Carolinians is "a network of public-private partnerships across North Carolina that shares the common goal of helping all North Carolinians to be healthy." The members of local partnerships are representatives of the agencies and organizations that serve the health and human service needs of the local population, as well as representatives from businesses, communities of faith, schools and civic groups. In Pasquotank County, the local Healthy Carolinians coalition is Healthy Carolinians of the Albemarle, which also includes Camden, Currituck and Perquimans counties.

The community health assessment, which is both a process and a document, investigates and describes the current health status of the community, what has changed since the last assessment, and what still needs to change to improve the health of the community. The *process* involves the collection and analysis of a large range of data, including demographic, socioeconomic and health statistics, environmental data, and professional and public opinion. The *document* is a summary of all the available evidence and serves as a resource until the next assessment. The completed CHA serves as the basis for prioritizing the community's health needs, and culminates in planning to meet those needs.

Albemarle Regional Health Services contracted with Sheila S. Pfaender, Public Health Consultant, to assist in conducting the 2013 Community Health Needs Assessment for the seven counties of the ARHS region, following the guidance provided by the *Community Assessment Guidebook: North Carolina Community Health Assessment Process*, published by the NC Office of Healthy Carolinians/Health Education and the NC State Center for Health Statistics (December 2011). The assessment also adheres to the 2012 standards for community assessment stipulated by the NC Local Health Department Accreditation (NCLHDA) Program.

Dana Hamill, ARHS, Lead Regional CHA Coordinator worked with the consultant to develop a multi-phase plan for conducting the assessment. The phases included: (1) a research phase to identify, collect and review demographic, socioeconomic, health and environmental data; (2) a data synthesis and analysis phase; (3) a period of data reporting and discussion among the

project partners; (4) a community input phase to elicit opinion and ideas regarding the assessment outcomes among community stakeholders; and (5) a prioritization and decision-making phase. Upon completion of this work the CHA partners and the community will have the tools they need to develop plans and activities that will improve the health and well-being of the people living in Pasquotank County. The consultant provided direct technical assistance for phases 1, 2, and 3.

ASSESSMENT METHODOLOGY

In order to learn about the specific factors affecting the health and quality of life of Pasquotank County residents, the consultant tapped numerous readily available secondary data sources. For data on Pasquotank County demographic, economic and social characteristics sources included: the US Census Bureau; Log Into North Carolina (LINC); NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; NC Division of Aging and Adult Services; NC Child Advocacy Institute; NC Department of Public Instruction; NC Department of Justice; NC Department of Juvenile Justice and Delinquency Prevention; NC Department of Administration; NC Division of Medical Assistance; NC Division of Child Development; NC State Board of Elections; NC Division of Health Services Regulation; the Cecil B. Sheps Center for Health Services Research; and the Annie E. Casey Foundation *Kids Count Data Center*. Local sources for socioeconomic data included: the Pasquotank County Department of Social Services; Elizabeth City-Pasquotank Public Schools; and other Pasquotank County agencies and organizations. The author has made every effort to obtain the most current data available at the time the report was prepared.

The primary source of health data for this report was the NC State Center for Health Statistics, including its County Health Data Books, Behavioral Risk Factor Surveillance System, Vital Statistics, and Cancer Registry. Other health data sources included: US Centers for Disease Control and Prevention; NC DPH Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; National Center for Health Statistics; Healthy People 2020; NC DPH Nutrition Services Branch; UNC Highway Safety Research Center; NC Department of Transportation; and the NC DPH Oral Health Section. Through the current CHA partnership with the region's four hospitals, the consultant accessed de-identified hospital utilization data (e.g., emergency department visits, in-patient hospitalizations, and surgeries) that contributed greatly to the understanding of health issues in Pasquotank County. Other important local health data sources included ARHS, and Pasquotank County Emergency Medical Services.

Because in any community health assessment it is instructive to relate local data to similar data in other jurisdictions, Pasquotank County data is compared to like data describing the state of NC as a whole, as well as to data from Scotland County, a state-recommended "peer county". Also used for comparison is data for the average measure of each parameter in the seven counties in the ARHS jurisdiction: Bertie County, Camden County, Chowan County, Currituck County, Gates County, Pasquotank County and Perquimans County. In some cases Pasquotank County data is compared to US-level data, or to Healthy People 2020 goals or other standardized measures. Where appropriate, trend data has been used to show changes in indicators over time, at least since the 2010 Pasquotank County CHA, but sometimes further back than that.

Environmental data were gathered from sources including: US Environmental Protection Agency; NC Department of Environment and Natural Resources Divisions of Air Quality, Waste Management, and Environmental Health; and NC State Laboratory of Public Health.

ARHS and its partners conducted a community health survey among members of the public and a stakeholder survey among community leaders as part of the CHA process. The methodologies and results of these surveys are presented in a separate section of this report.

CHAPTER ONE: DEMOGRAPHIC DATA

GEOGRAPHY

Pasquotank County is located in northeast NC and is part of the Coastal Plain region. It is made up primarily of flatlands and contains miles of waterfront with the Little River to the west, the Albemarle Sound to the south and the Pasquotank River to the east. The county covers 289 square miles, 227 of land and 62 of water (1,2).

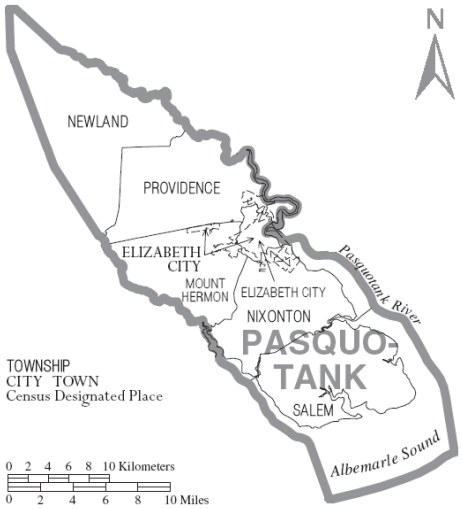
Elizabeth City is the county seat. Other towns include Nixonton and Weeksville. Norfolk, VA is the nearest metropolitan area, approximately 37 miles to the north. Raleigh, NC is about 166 miles to the west, and Wilmington, NC is 214 miles to the southwest. Adjacent to Pasquotank County are Perquimans County to the southwest, Camden County to the east, and Gates County to the northwest (1,2).

US Highway 17 runs through Elizabeth City northeast toward the Outer Banks and southwest toward Wilmington; it joins US 64, which leads west to Raleigh. Also running through the county seat is US Highway 158. This highway runs south to the Albemarle Sound and the Outer Banks and northwest to Gates County. The nearest interstate highway is I-95, approximately 30 miles west of the county (1,2).

The nearest commercial airport to the county is the Norfolk International Airport in Norfolk, VA, located 53 miles from Elizabeth City. The Newport News/Williamsburg International Airport in Newport News, VA is 80 miles from Elizabeth City, and the Pitt-Greenville Airport, in Greenville, NC, is 97 miles from Elizabeth City. The closest stop for any passenger railway system is in Norfolk, VA. The Greyhound bus line has a stop in Elizabeth City (3,4,5).

Pasquotank County topography ranges from sea level to 21 feet. The climate is relatively mild. The average minimum temperature for the month of January is 32 degrees, with the average maximum temperature in July being 89 degrees. The average monthly precipitation is four inches (1,6).

Figure 1. Map of Pasquotank County



HISTORY

Pasquotank County was originally inhabited by the Pasquotank Indians and was formed out of the Albemarle Precinct in 1660 and established as its own county in 1668. The county was named for the Algonquian Indian word *pasketanki*, meaning "where the current divides or forks". There are two rivers flanking the county, the Pasquotank River and the Little River, making the name quite appropriate. These rivers are significant because during the colonial period they defined transportation centers, provided fish, and made it possible to take the settler's products directly to Caribbean ports and to the other colonies. The abundance of water also aided the farmers with their crops of tobacco, cotton, wheat and corn. Pasquotank and its county seat have long been the first step between the Albemarle region and the wider world. (7,8).

The town of Nixonton, along the Little River, was the county's first settlement and commercial center. The county's only incorporated town for nearly fifty years, Nixonton, served as the county seat from 1785 until 1799. It was on land provided by, and thus named for, Zachariah Nixon. In 1799, a new ferry crossing was established just above The Narrows, a location where the river was narrow and easy to cross in any weather. A settlement developed on a landing in The Narrows and became a convenient stopping place for travelers, mariners, shippers and buyers. Originally called Redding, the legislature changed the name of the thriving settlement to Elizabeth Town in 1794 and later to Elizabeth City, which became the county seat in 1799. Other towns and communities in Pasquotank include Nixonton, Morgan's Corner and Weeksville (7,8,9).

The first permanent settlers to North Carolina were Virginians, drawn to the region by reports of fertile bottom lands, abundant timber resources, and a favorable climate. Unlike the landing at Jamestown in 1607, the beginning of permanent settlements in this area was not a mass migration, but rather the chance wandering of those seeking unoccupied land, hunters in search of furs or meat and explorers and adventurers. These settlers arrived in the Albemarle Sound area around 1650 and began purchasing land from local Indian tribes. The first group of six freeholders met in 1665 to organize community affairs. Present was William Drummond, the first governor of Albemarle, appointed in 1664 by Virginia governor William Berkeley on orders of the Lord Proprietors. Believed to also be present were the first two settlers of the area, Samuel Pricklove and George Durant. Albemarle was isolated and the general nature of its people independent, both believed to be factors contributing to unstable government in the colony's early years of existence (8,9).

Other than Quaker meetings in private houses, early Albemarle County offered no formal religious life. Instrumental in the development and arrival of Quakerism were the missionaries William Edmundson and George Fox. With the Quakers being the only church available to the region, there were many converts, particularly in Perquimans and Pasquotank precincts (8,9).

The Albemarle region was governed by independent men for the first thirty years, and Quakers served in all levels of political office. Despite conflict for government control between the established church and the Quaker faction, the Quakers were quite dominant in early Pasquotank. A Quaker and a Lord Proprietor, John Archdale, was Governor from 1694 to 1696. The Quaker influence began to wane after a law was passed requiring officeholders to take an oath to serve the English crown. Not believing oaths should be made to any but God, the Quakers met opposition and were no longer permitted to hold public office (8,9).

During the Revolution, Pasquotank provided one brigadier general and multiple colonels, but there were no local engagements. There was no real imprint left by the War of 1812 either. However, the Civil War placed an unforgettable mark in 1862, when ships were sent up the Pasquotank River and captured the town of Elizabeth City. Many homes, most stores and the courthouse were destroyed by fire. Credit is given to citizen Arthur Jones, subsequently known as 'Colonel' Arthur Jones although he was not affiliated with the military, who saw that the fire was spreading and took a wagon and team to the courthouse in order to load and save invaluable county documents and records. He drove the wagon to Parkville and hid the documents in a barn where they safely remained until the end of the hostilities in 1865. The years between 1862 and 1865 were cruel and gruesome times in many ways, but the worst was yet to come after peace was restored. The era of "Reconstruction" lasted for years and made its blight on Pasquotank. On a positive note, the lack of friendliness between Pasquotank and neighboring counties of Virginia quickly disappeared due to the common bond resulting from the Revolution (8,9).

A distinguished citizen of Pasquotank, George W. Brooks of Elizabeth City, is credited with having "broken the back" of the cruel, corrupt carpet-bag rule. Leading citizens of Alamance and Caswell counties had been imprisoned in 1870 without charges, simply because they had supported the Confederacy. When orders of the state courts were contemptuously disregarded by military government, Brooks issued a Federal *writ of habeas corpus* requiring the military to produce its prisoners. Although an appeal was made to President Grant, the Federal injunction was forced to be honored and the rights of individuals were restored with innocent men no longer being subjected to persecution by martial law (8,9).

As Pasquotank began healing its wounds following the War Between the States, it found several former Union soldiers returning. Some married and settled there for life, one becoming an officer of the local Confederate post. Others from the North came to the county with their capital and talents, married locally and had descendants who became leaders of the community. The hospitable nature of Pasquotank people to strangers made welcome those who joined in making the county a better place to live and raise their families (8,9).

Somewhere around 1880, a new wave of prosperity swept over Pasquotank, and other than the depression years, it has continued. Blooded livestock appeared soon after 1900, followed by new crops of soybeans, lespedeza and hybrid corn. Beef production and dairying was added to the hog and sheep raising. Machine methods in farming became necessary due to lack of good labor following the depression, and revolutionized the county's agriculture. Concrete grain elevators are now common sights about the countryside and farming is one of the county's most profitable activities (8,9).

The waterways of Pasquotank County are one of its definitive characteristics, not just during its early years but in present times as well. Sitting on the northern portion of the Albemarle Sound and bordered by two rivers, the county is an attractive destination for shipping, boating, fishing, diving and other water-related activities. Elizabeth City has become a favorite stop on the Intracoastal Waterway and combines a vast history, integrated economy, and diversified culture. A revitalization of the town included new docks and boat facilities, shops and a museum which interprets over 400 years of local history. Many changes have been brought to the county over the years, but in basic ways Pasquotank county and its people are still similar to their forefathers and inherited tradition (8,9).

POPULATION CHARACTERISTICS

General Population Characteristics

The following general population characteristics of Pasquotank County and its peer county were based on 2010 US Census data presented in Table 1.

- As of the 2010 US Census, the population of Pasquotank County was 40,661.
- The proportion of males and females in Pasquotank County were nearly equal, which is the typical pattern.
- The overall median age in Pasquotank County was 36.6, 5.4 years *younger* than the median age for the seven-county ARHS region and 1.8 years *younger* than Scotland County, an assigned peer county. The median age in Pasquotank County was 0.8 years *younger* than the median age for NC as a whole.

Table 1. General Demographic Characteristics (2010 US Census)

Location	Total Population	Number Males	% Population Male	Median Age Males	Number Females	% Population Female	Median Age Females	Overall Median Age
Pasquotank County	40,661	19,969	49.1	34.9	20,692	50.9	38.5	36.6
Regional Average	19,416	9,517	49.0	40.7	9,900	51.0	43.2	42.0
Scotland County	36,157	17,466	48.3	36.9	18,691	51.7	39.9	38.4
State of NC	9,535,483	4,645,492	48.7	36.0	4,889,991	51.3	38.7	37.4

Note: percentages by gender are calculated.
Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.

Population by Township

Pasquotank County is divided into six townships: Elizabeth City Township, Mount Herman Township, Newland Township, Nixonton Township, Providence Township, and Salem Township. The following population information was derived from 2010 US Census data presented in Table 2.

- Elizabeth City Township was the largest township by population in Pasquotank County, accounting for almost 29% of the county's population.
- Nixonton Township was the second-largest township in Pasquotank County, with 23% of the county's population.
- Salem Township was the smallest township in Pasquotank County, home to only 4% of the overall county population.
- Nixonton Township was the youngest township in the county in terms of median age: 31.3 years.
- Salem Township was the oldest township in the county, with a median age of 42.5 years.

Table 2. Population by Township, Pasquotank County (2010 US Census)

Township	No. of Persons	% of County Population	Median Age
Elizabeth City Township	11,741	28.9	35.1
Mount Hermon Township	6,927	17.0	37.8
Newland Township	2,791	6.9	39.2
Nixonton Township	9,170	22.6	31.3
Providence Township	8,351	20.5	38.8
Salem Township	1,681	4.1	42.5
Pasquotank County Total	**40,661**	**100.0**	**36.6**

Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.

Population Growth

Table 3 presents historical county population counts and population projections from 1980 through 2030. This data projects that the rate of population growth in Pasquotank County will slow in the current decade and become zero by 2030.

Table 3. Decadal Population Growth (1980-2030)

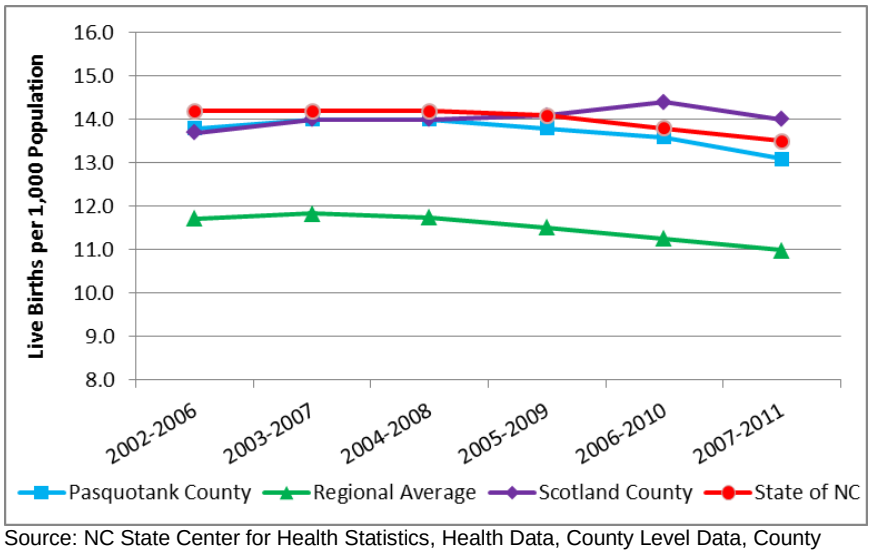
Location	Number of Persons and Percent Change										
	1980	1990	% Change 1980-1990	2000	% Change 1990-2000	2010	% Change 2000-2010	2020 (Projection)	% Change 2010-2020	2030 (Projection)	% Change 2020-2030
Pasquotank County	28,492	31,298	9.8	34,987	11.8	40,661	16.2	40,815	0.4	40,821	0.0
Regional Average	13,908	14,941	7.4	16,550	10.8	19,416	17.3	20,096	3.5	20,772	3.4
Scotland County	32,273	33,763	4.6	35,998	6.6	36,157	0.4	34,638	-4.2	33,178	-4.2
State of NC	5,880,095	6,632,448	12.8	8,046,485	21.3	9,535,483	18.5	10,966,956	15.0	12,465,481	13.7

Note: percentage change is calculated.
Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population (Data Item 5001); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Birth Rate

Overall population growth is a function both of increase (via immigration and birth) and decrease (via emigration and death). Figure 2 illustrates that the birth rate is declining in NC and all three other jurisdictions in the comparison.) In Pasquotank County, the birth rate decreased from 13.8 live births per 1,000 population in the 2002-2006 aggregate period to 13.1 live births per 1,000 population in the 2007-2011 aggregate period, a decrease of 5%. The birth rate for NC exceeded the comparable rates in the other jurisdictions for all periods cited until 2006-2010 when it was surpassed by Scotland County. The lowest birthrate in the comparison throughout the period cited was the regional average.

Figure 2. Birth Rate Trend, Live Births per 1,000 Total Population (Five-Year Aggregates, 2002-2006 through 2007-2011)



Source: NC State Center for Health Statistics, Health Data, County Level Data, County Health Databooks 2008, 2009, 2010, 2011, 2012, 2013; http://www.schs.state.nc.us/schs/data/databook/.

Population Density

The Pasquotank County population appears to be increasing in density, as is the population in each of the comparator jurisdictions (Table 4).

Table 4. Decadal Population Density (1980-2030)

Location	Persons per Square Mile					
	1980	1990	2000	2010 (Estimate)	2020 (Projection)	2030 (Projection)
Pasquotank County	124.83	137.94	153.81	184.83	207.65	227.48
Regional Average	50.91	55.99	62.72	75.55	86.94	94.46
Scotland County	101.06	105.79	112.8	118.24	121.58	123.47
State of NC	120.4	136.1	165.2	191.9	219.9	248.2

Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population Density (Data Item 5004); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Race and Ethnicity

The population of Pasquotank County is more racially diverse than both the ARHS region and NC as a whole. For example, according to data in Table 5 from the 2010 US Census, the non-white population in Pasquotank County was approximately 43% of the total population, a proportion approximately twice the comparable proportion in NC as a whole (32%) and slightly less than twice the comparable proportion for the region (36%).

According to data in Table 5, in Pasquotank County:

- Whites composed 56.7% of the total population; regionally the comparable figure was 63.7% and statewide the figure was 68.5%.
- Blacks/African Americans composed 37.8% of the total population; regionally the comparable figure was 32.2% and statewide the figure was 21.5%.
- American Indians and Alaskan Natives composed 0.3% of the total population; regionally the comparable figure was 0.4% and statewide the figure was 1.3%.
- Asians, Native Hawaiians and Other Pacific Islanders composed 1.2% of the total population; regionally the comparable figure was 0.7% and statewide the figure was 2.3%.
- Hispanics/Latinos of any race composed 4.0% of the total population; regionally the comparable figure was 2.8% and statewide the figure was 8.4%.

Table 5. Population Distribution by Race/Ethnicity (2010 US Census)

Location	Total	Number and Percent													
		White		Black or African-American		American Indian and Alaskan Native		Asian, Native Hawaiian and Other Pacific Islander		Some Other Race		Two or More Races		Hispanic or Latino of Any Race	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasquotank County	40,661	23,059	56.7	15,355	37.8	141	0.3	473	1.2	737	1.8	896	2.2	1,642	4.0
Regional Average	19,416	12,378	63.7	6,256	32.2	75	0.4	145	0.7	232	1.2	330	1.7	541	2.8
Scotland County	36,157	16,822	46.5	13,943	38.6	3,934	10.9	284	0.8	385	1.1	789	2.2	754	2.1
State of NC	9,535,483	6,528,950	68.5	2,048,628	21.5	122,110	1.3	215,566	2.3	414,030	4.3	206,199	2.2	800,120	8.4
Source	a	a	b	a	b	a	b	a	b	a	b	a	b	a	b

Note: percentages are calculated.
Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.

Race and Ethnicity by Township

The following information about racial and ethnic population diversity at the township level in Pasquotank County was derived from 2010 US Census data presented in Table 6.

- The population in Elizabeth City Township was predominately Black/African American. The populations of the other five townships were predominately white.
- Elizabeth City Township was the township with by far the largest *number* of Black/African Americans, 6,691; this figure represented 16.5% of the total county population and 44% of all Black/African American persons in the county.
- Providence Township was the township with the largest *number* of whites, 5,815; this figure represented 14.3% of the total county population and 25% of all the white persons in the county.
- Elizabeth City Township was the township with the largest *number* of Hispanics/Latinos, 751; this figure represented 1.8% of the total county population and 46% of all Hispanic/Latino persons in the county.

Table 6. Population by Race/Ethnicity, by Township, Pasquotank County (2010 US Census)

Township	Persons Self-Identifying as of One Race											Two or More Races		Hispanic or Latino (of any race)	
	Total Population	White		Black or African American		American Indian and Alaska Native		Asian, Native Hawaiian or Other Pacific Islander		Some Other Race					
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No	%
Elizabeth City Township	11,741	4,241	10.4	6,691	16.5	48	0.1	110	0.3	399	1.0	252	0.6	751	1.8
Mount Hermon Township	6,927	4,581	11.3	1,968	4.8	25	0.1	88	0.2	101	0.2	164	0.4	245	0.6
Newland Township	2,791	1,632	4.0	1,054	2.6	9	0.0	6	0.0	13	0.0	77	0.2	51	0.1
Nixonton Township	9,170	5,373	13.2	3,334	8.2	27	0.1	121	0.3	114	0.3	201	0.5	268	0.7
Providence Township	8,351	5,815	14.3	2,090	5.1	32	0.1	135	0.3	96	0.2	183	0.5	296	0.7
Salem Township	1,681	1,417	3.5	218	0.5	0	0.0	13	0.0	14	0.0	19	0.0	31	0.1
Pasquotank County Total	**40,661**	**23,059**	**56.7**	**15,355**	**37.8**	**141**	**0.3**	**473**	**1.2**	**737**	**1.8**	**896**	**2.2**	**1,642**	**4.0**

Note: percentages are calculated from population figures. Percentage figures describe a racial or ethnic group as a proportion of the overall county population.
Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.

Age

The following information about the age (and gender) distribution of the Pasquotank County population was derived from 2010 US Census data presented in Table 7.

- In terms of both numbers (3,489) and percent (8.6%), the largest segment of the population in Pasquotank County was the age group 20-24. This differed significantly from NC as a whole, where the segment composing the largest number and percent (7.3%) of the state's population was the age group, 45-49.
- Persons 65 years of age or older composed 13.5% of the population in Pasquotank County, but 12.8% of the population of NC.
- Persons 19 years of age and younger composed 26.7% of the population in Pasquotank County, and 26.8% of the population of NC.
- In both Pasquotank County and NC, in the age groups 50-54 and older the percent of the population composed of females exceeded or equaled the percent of the population composed of males.

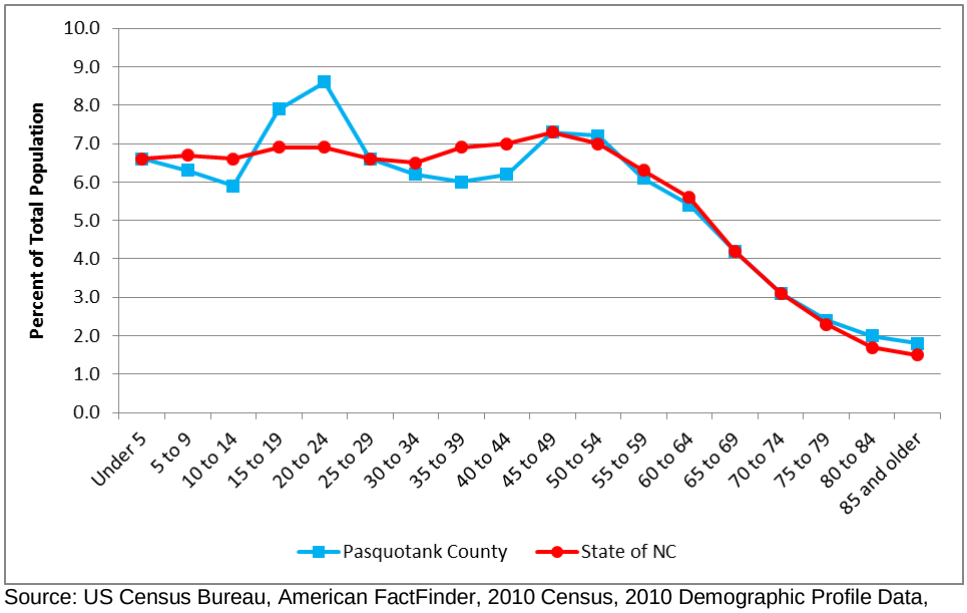
Table 7. Population Distribution by Age and Gender, Number and Percent (2010 US Census)

Age Group	Pasquotank County						North Carolina					
	No. in Population			% of Total Population			No. in Population			% of Total Population		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All ages	40,661	19,969	20,692	100.0	49.1	50.9	9,535,483	4,645,492	4,889,991	100.0	48.7	51.3
Under 5	2,693	1,396	1,297	6.6	3.4	3.2	632,040	322,871	309,169	6.6	3.4	3.2
5 to 9	2,557	1,331	1,226	6.3	3.3	3.0	635,945	324,900	311,045	6.7	3.4	3.3
10 to 14	2,417	1,216	1,201	5.9	3.0	3.0	631,104	322,795	308,309	6.6	3.4	3.2
15 to 19	3,209	1,624	1,585	7.9	4.0	3.9	659,591	338,271	321,320	6.9	3.5	3.4
20 to 24	3,489	1,746	1,743	8.6	4.3	4.3	661,573	336,648	324,925	6.9	3.5	3.4
25 to 29	2,701	1,443	1,258	6.6	3.5	3.1	627,036	311,499	315,537	6.6	3.3	3.3
30 to 34	2,523	1,254	1,269	6.2	3.1	3.1	619,557	304,807	314,750	6.5	3.2	3.3
35 to 39	2,440	1,265	1,175	6.0	3.1	2.9	659,843	324,681	335,162	6.9	3.4	3.5
40 to 44	2,518	1,289	1,229	6.2	3.2	3.0	667,308	329,652	337,656	7.0	3.5	3.5
45 to 49	2,957	1,497	1,460	7.3	3.7	3.6	698,753	341,432	357,321	7.3	3.6	3.7
50 to 54	2,945	1,383	1,562	7.2	3.4	3.8	669,893	323,702	346,191	7.0	3.4	3.6
55 to 59	2,488	1,165	1,323	6.1	2.9	3.3	600,722	285,244	315,478	6.3	3.0	3.3
60 to 64	2,211	1,067	1,144	5.4	2.6	2.8	538,039	255,034	283,005	5.6	2.7	3.0
65 to 69	1,716	759	957	4.2	1.9	2.4	403,024	188,125	214,899	4.2	2.0	2.3
70 to 74	1,247	579	668	3.1	1.4	1.6	294,543	133,021	161,522	3.1	1.4	1.7
75 to 79	982	397	585	2.4	1.0	1.4	223,655	94,981	128,674	2.3	1.0	1.3
80 to 84	831	319	512	2.0	0.8	1.3	165,396	63,573	101,823	1.7	0.7	1.1
85 and older	737	239	498	1.8	0.6	1.2	147,461	44,256	103,205	1.5	0.5	1.1

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.

Figure 3 compares the age distribution of the Pasquotank County population to the age distribution of the NC population. In Pasquotank County, there were smaller proportions of young persons except in the age range 15-24, and roughly similar proportions of older persons.

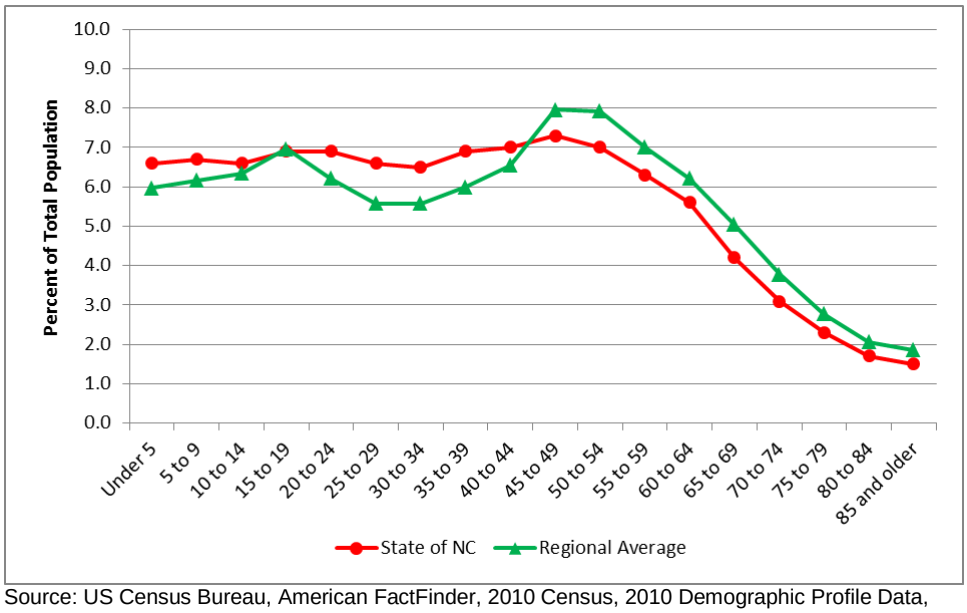
Figure 3. Population Distribution by Age, Pasquotank County and NC (2010)



Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010 (Geographies as noted); http://factfinder2.census.gov.

Figure 4 compares the population distribution by age for the ARHS region and the state of NC. From this data it appears that region-wide there are lower proportions of younger people and higher proportions of older people than in the state as a whole.

Figure 4. Population Distribution by Age, ARHS Region and NC (2010)



Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010 (Geographies as noted); http://factfinder2.census.gov.

Age by Township

The discussion below is based on the 2010 US Census data for Pasquotank County presented in Table 8.

- Mount Herman Township was the township with the highest proportion of persons under the age of 18 (24.7%).
- Nixonton Township had the highest proportion of persons ages 18-24 (23.8%).
- Providence Township had the highest proportion of persons ages 25-34 (15.5%).
- Newland Township had the highest proportion of persons ages 35-44 (14.9%).
- Salem Township had the highest proportion of persons ages 45-54 (17.7%) and ages 55-64 (14.9%).
- Elizabeth City Township had the highest proportion of persons age 65 and older (15.0%).

Table 8. Population by Age, by Township, Pasquotank County (2010 US Census)

Township	Percent of Total Population						
	<18	18-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65 Years and Over
Elizabeth City Township	24.4	11.4	14.2	10.5	13.4	11.1	15.0
Mount Hermon Township	24.7	8.3	13.2	13.1	15.8	11.7	13.2
Newland Township	24.4	8.4	11.3	14.9	16.2	12.5	12.3
Nixonton Township	19.9	23.8	9.5	10.7	13.2	10.8	12.1
Providence Township	20.9	8.5	15.5	14.1	15.1	12.0	13.9
Salem Township	22.4	7.7	9.5	14.2	17.7	14.9	13.7
Pasquotank County Total	22.6	12.7	12.8	12.2	14.5	11.6	13.6

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Census Summary File 1 (SF-1), Table QT-P1, Age Groups and Sex (geographies as listed); http://factfinder2.census.gov.

Elderly Population

The population segment age 65 and older often requires more and different health and social services than the rest of the population, and understanding how that population will change in coming years will be an important consideration in planning to meet future health and human service needs.

The following information regarding the elderly population in Pasquotank County was extracted from multi-part Table 9, which was based on 2000 and 2010 US Census figures and current projections for the years 2020 and 2030 from the NC Office of State Budget and Management.

- The proportion of every age group in Pasquotank County age 65 and older will increase through the year 2030.
- Though all segments of the elderly population will grow, the segment expected to grow by the largest percentage in the 20 years between 2010 and 2030 is the group aged 65-74, which is predicted to grow by 56% over that period, from 7.3% to 11.4% of the total county population.
- The segment of the population expected to grow by the second largest percentage between 2010 and 2030 is the group aged 75-84, which is predicted to grow by 51% over that period, from 4.5% to 6.8% of the total county population.
- The segment of the Pasquotank County population age 65 and older is projected to total 8,367 persons by 2030.

Table 9. Growth Trend for the Elderly (Age 65 and Older) Population, by Decade (2000 through 2030)

Location	2000 Census Data								
	Total Population (2000)	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Pasquotank County	34,897	4,911	14.1	2,532	7.3	1,769	5.1	610	1.7
Regional Total	116,155	17,502	15.1	9,504	8.2	6,011	5.2	1,987	1.7
Regional Average	16,594	2,500	n/a	1,358	n/a	859	n/a	284	n/a
Scotland County	35,998	4,082	11.3	2,261	6.3	1,354	3.8	467	1.3
State of NC	8,049,313	969,048	12.0	533,777	6.6	329,810	4.1	105,461	1.3
Source	1	1	1	1	5	1	5	1	5

Table 9. Growth Trend for the Elderly (Age 65 and Older) Population, by Decade (2000 through 2030) Continued

Location	2010 Census Data								
	Total Population (2010)	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Pasquotank County	40,661	5,513	13.6	2,963	7.3	1,813	4.5	737	1.8
Regional Total	135,913	21,119	15.5	12,006	8.8	6,579	4.8	2,534	1.9
Regional Average	19,416	3,017	n/a	1,715	n/a	940	n/a	362	n/a
Scotland County	36,157	4,914	13.6	2,822	7.8	1,479	4.1	613	1.7
State of NC	9,535,483	1,234,079	12.9	697,567	7.3	389,051	4.1	147,461	1.5
Source	2	2	2	2	5	2	5	2	5

Location	2020 (Projected)								
	Total Projected Population	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Pasquotank County	40,484	6,866	17.0	3,953	9.8	2,068	5.1	845	2.1
Regional Total	141,935	27,796	19.6	16,069	11.3	8,592	6.1	3,135	2.2
Regional Average	20,276	3,971	19.6	2,296	n/a	1,227	n/a	448	n/a
Scotland County	31,443	6,252	19.9	4,003	12.7	1,725	5.5	524	1.7
State of NC	10,614,862	1,763,950	16.6	1,051,688	9.9	519,963	4.9	192,299	1.8
Source	3	3	5	3	5	3	5	3	5

Location	2030 (Projected)								
	Total Projected Population	# Population Age 65 and Older	% Population Age 65 and Older	# Age 65-74	% Age 65-74	# Age 75-84	% Age 75-84	# Age 85+	% Age 85+
Pasquotank County	40,484	8,367	20.7	4,607	11.4	2,769	6.8	991	2.4
Regional Total	149,095	34,752	23.3	19,056	12.8	11,566	7.8	4,130	2.8
Regional Average	21,299	4,965	n/a	2,722	n/a	1,652	n/a	590	n/a
Scotland County	26,284	6,773	25.8	3,713	14.1	2,455	9.3	605	2.3
State of NC	11,629,556	2,262,855	19.5	1,241,404	10.7	765,598	6.6	255,853	2.2
Source	4	4	5	4	5	4	5	4	5

1 - US Census Bureau, American FactFinder. *Profile of General Demographic Characteristics: 2000 (DP-1), SF1;* http://factfinder2.census.gov.
2 - US Census Bureau, American FactFinder. *Profile of General Population and Housing Characteristics: 2010 (DP-1);* http://factfinder2.census.gov.
3 - NC Office of State Budget and Management, County/State Population Projections. *Age, Race, and Sex Projections, Age Groups - Total, July 1, 2020 County Total Age Groups - Standard;* http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_projections.shtm.
4 - NC Office of State Budget and Management, County/State Population Projections. *Age, Race, and Sex Projections, Age Groups - Total, July 1, 2030 County Total Age Groups - Standard;* http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_projections.shtm.
5 – Percentages are calculated using age group population as numerator and total population as denominator.

Demographic Characteristics of the Elderly Population

Table 10 summarizes a variety of data describing the educational and financial status of the elderly population. Regarding the populations aged 65 or older in the jurisdictions presented for comparison in the table, the elderly population in Pasquotank County had:

- the lowest proportion with less than a high school diploma or GED (28.3%);
- the second-highest proportion with a graduate or professional degree (7.2%);
- the highest median household income ($34,140), $3,345 higher than the regional average, and $3,115 higher than the NC average; and
- the lowest average monthly social security benefits ($1,036).

In addition, Pasquotank County had the highest proportion of persons age 65 or older in the labor force (23.4%) and the second lowest proportion of elderly homeowners (76.7%).

Table 10. Demographic Characteristics of the Population Age 65+

Location	% Persons Age 65+ with < HS Diploma or GED (2006-2010)	% Persons Age 65+ with Graduate or Professional Degree (2006-2010)	% Homeowners Age 65+ (2010)	% Persons Age 65+ in Labor Force (2006-2010)	Median Household Income Persons Age 65+ (2006-2010)	Average Monthly Social Security Benefit for Persons Age 65+ (2010)
Pasquotank County	28.3	7.2	76.7	23.4	$34,140	$1,036
Regional Average	31.7	4.6	84.6	15.2	$30,795	$1,047
Scotland County	43.9	4.7	73.8	11.2	$22,933	$1,119
State of NC	28.4	7.5	79.9	14.9	$31,025	$1,151

Source: NC DHHS Division of Aging and Senior Services, County Profiles; http://www.dhhs.state.nc.us/aging/cprofile/cprofile.htm.

Non-English Speaking Population

The foreign-born population in a community is one that potentially does not speak English, and so is of concern to service providers.

In NC, the greatest proportion of the increase in foreign-born persons is represented by immigrants of Hispanic origin; however, statewide there has also been an influx of foreign-born immigrants from Southeast Asia.

According to US Census Bureau estimates summarized in Table 11:

- There were 1,560 foreign-born residents residing in Pasquotank County in 2010. Using a base 2010 county population figure of 40,661, foreign-born residents made up 3.8% of the total county population at that time.
- Since 1980, the largest influx of the foreign-born population in Pasquotank County—708 persons—arrived between 2000 and 2010, an increase of 83.1% over that 10-year span. That rate of county increase was higher than the figures for the region (70.8) and the state as a whole (67.4).

Table 11. Growth of the Foreign-Born Population (Before 1980 through 2010)

Location	Number of Persons Arriving				% Increase 2000-2010
	Before 1980	1980-1989	1990-1999	After 2000	
Pasquotank County	417	250	185	708	83.1
Regional Total	1,345	581	595	1,784	70.8
Scotland County	120	121	378	220	35.5
State of NC	116,761	104,544	240,941	311,461	67.4
Source:	1	1	1	1	a

Source: US Census Bureau, American Fact Finder, 2010 ACS 5-Year Estimates, Table B05005: Year of Entry by Citizenship Status in the United States. http://factfinder2.census.gov.

Linguistic Isolation

"Linguistic isolation", reflected as an inability to communicate because of a lack of language skills, can be a barrier preventing foreign-born residents from accessing needed services. The US Census Bureau tracks linguistically isolated households according to the following definition:

> *A linguistically isolated household is one in which no member 14 years and over (1) speaks only English, or (2) speaks a non-English language and speaks English "very well". In other words, all members 14 years old and over have at least some difficulty with English.*

The following information about linguistically isolated households is derived from the 2005-2009 five-year US Census Bureau estimates presented in Table 12.

- Of the 14,341 Pasquotank County households included in the statistic, an estimated 896 (6.2%) spoke a language other than English. Of these, an estimated 42 (4.7%) were linguistically isolated.
- The only linguistically isolated households in Pasquotank County in the period cited occurred within the Spanish-speaking population. Region-wide, there also were linguistically isolated households where Asian or Pacific island languages were spoken instead of English.

Table 12. Household Language by Linguistic Isolation (Five-Year Estimate, 2005-2009)

Location	Total Households	Number of Households								
		English-Speaking	Spanish-Speaking		Speaking Other Indo-European Languages		Speaking Asian or Pacific Island Languages		Speaking Other Languages	
			Isolated	Not isolated	Isolated	Not isolated	Isolated	Not isolated	Isolated	Not isolated
Pasquotank County	14,341	13,445	42	390	0	397	0	41	0	26
Regional Total	49,669	47,242	206	1,102	0	901	21	132	0	65
Regional Average	7,096	6,749	29	157	0	129	3	19	0	9
Scotland County	13,233	12,745	47	217	0	109	0	91	0	24
State of NC	3,541,807	3,194,328	71,843	137,729	7,637	67,897	10,388	35,597	2,466	13,922

Source: US Census Bureau, American Fact Finder, Table B16002: Household Language by Linguistic Isolation, 2009 American Community Survey 5-Year Estimates. http://factfinder.census.gov.

Age Distribution of the Latino Population

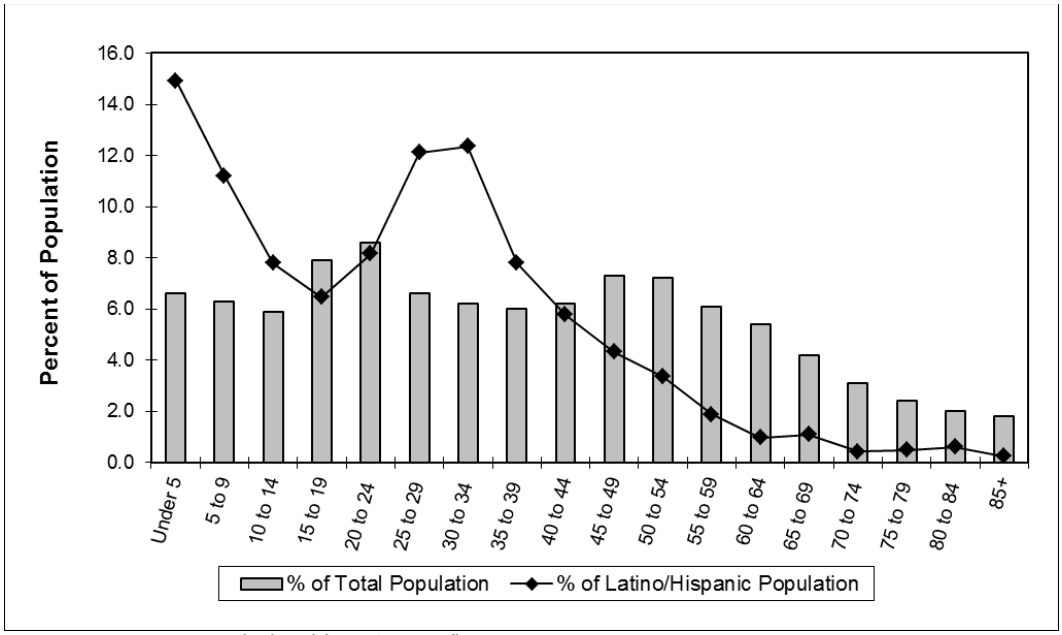
Since the Hispanic/Latino population is the principal linguistically-isolated group in Pasquotank County, further knowledge of the characteristics of this group is helpful in anticipating service needs.

In Pasquotank County, as in other counties in NC, a major impetus for immigration—at least until the economic downturn that began in 2008—was the prospect of employment opportunities. One would expect then that the age groups predominant in this population would be those in their "prime" for work, especially the physical labor-type jobs in construction, agricultural, and fishing industries available to them in the coastal region of the state. The spouses of these workers would be in the midst of their childbearing years, so it might also be expected that this population would have children.

Figure 5 is a graphic depiction of the 2010 US Census population profile by age group of the total Pasquotank County population compared to the same profile for the Hispanic/Latino population.

- In Pasquotank County age groups 0-14 and 25-39 were present in higher proportions in the Hispanic/Latino population than in the overall county population. There were lower proportions for Hispanics/Latinos than for the general population in all the other age groups.
- The highest proportions of the Hispanic/Latino population in Pasquotank County occurred in the under 5 and the 25-34 age groups. In the overall county population, the highest proportions were in age groups covering the span from 15 to 24.

Figure 5. Age Distribution of Overall and Latino Populations in Pasquotank County (2010)



Note: percentages are calculated from Census figures.
Source (Overall Population): US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; http://factfinder2.census.gov.
Source (Latino Population): US Census Bureau, American Fact Finder, 2010 Census, Summary File 1 (SF-1), PCT12H, Sex by Age (Hispanic or Latino) (geographies as noted); http://factfinder2.census.gov.

Special Populations

Military Veterans

A population group that sometimes needs special health services is military veterans. Table 13 summarizes information about that population for the aggregate period 2006-2010.

The population in Pasquotank County had the highest proportion of military veterans among the jurisdictions under comparison. Veterans composed 13.4% of Pasquotank County's overall adult civilian population in the period cited.

Home to the largest contingent, Pasquotank County also was home to the second-youngest veteran population among the comparators: 30.7% of the veterans in Pasquotank County were age 65 or older, compared to 38.0% in the region and 29.5% in Scotland County. Nationally, 40.0% of the veteran population was age 65 or older; in NC the comparable figure was 35.7%.

Table 13. Veteran Status of Population (Five-Year Estimate, 2006-2010)

Location	Civilian Population 18 years and over					% Veterans by Age				
	Total	# Non-Veterans	% Non-Veterans	# Veterans	% Veterans	18 to 34 years	35 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Pasquotank County	30,041	26,002	86.6	4,039	13.4	10.4	37.6	21.2	14.5	16.2
Regional Total	101,634	88,534	87.1	13,100	12.9	n/a	n/a	n/a	n/a	n/a
Regional Average	14,519	12,648	87.1	1,871	12.9	5.9	26.3	25.4	19.7	18.3
Scotland County	26,995	24,200	89.6	2,795	10.4	3.7	36.5	30.3	17.0	12.5
State of NC	6,947,547	6,200,495	89.2	747,052	10.8	8.7	30.0	25.7	17.9	17.8
National Total	228,808,831	206,156,335	90.1	22,652,496	9.9	7.8	26.3	25.4	19.0	21.4

Source: US Census Bureau, American Fact Finder. Veteran Status, 2010 American Community Survey 5-Year Estimate. Table S2101: Veteran Status; http://factfinder2.census.gov.

Blind and Visually-Impaired Persons

Table 14 presents recent data on the number of blind or visually-impaired persons in the jurisdictions being compared. In 2011, there were 154 blind or visually-impaired persons living in Pasquotank County, and a total of 463 persons with those disabilities region-wide.

Table 14. Blind and Visually-Impaired Persons (2011)

Location	Number Blind/Visually Impaired (2011)
Pasquotank County	154
Regional Total	463
Regional Average	66
Scotland County	121
State of NC	20,972

Source: Log into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 520); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show

Special Needs Registry

In order to assist residents with special needs in the event of an emergency, county Emergency Management Officials develop a special needs registry to help emergency workers know about residents that may have difficulties managing for themselves during a disaster such as a hurricane, flood, winter storm, power outage, disease outbreak or other community-level emergency. Persons volunteer to be included on the registry and have the choice to accept or decline assistance when it is offered.

The Pasquotank-Camden Special Needs Registry is a database containing information about individuals in Pasquotank and Camden Counties who may require special assistance in the event of a disaster. The purpose of the registry is to provide emergency responders with important information about people in the affected area needing specialized help and to allow emergency responders to develop a more effective response. The information from the database will also be used to assist emergency planners in developing policies and procedures to address community needs in the event of a disaster.

A portion of the information from the Special Needs Registry application process is input into the Pasquotank-Camden Central Communication's (911) database system to be utilized as a record of the applicant's needs. This information may be shared with emergency responders, as needed, in response to an emergency call received from the applicant's address.

All information obtained is strictly confidential and can be utilized for emergency purposes or human service agency use only. The information collected is made available only to disaster responders, disaster planners, and persons who manage/assist with management of the information database or work towards providing services for persons with special needs. It is not made available to the public or any agency or organization that is not involved in the disaster response, disaster planning or mitigation.

The Registry is for anyone who has unique needs that hinder or prevent them from taking protective actions on their own. Examples include:

- People that need outside help to safely leave their home during a disaster;
- People that may be in jeopardy if they had to stay in their home for three days, without assistance;
- People with medical conditions requiring special equipment.
- People requiring life-support equipment that is dependent on electrical power.
- People with cognitive or developmental disabilities.
- People needing special notification about the need for evacuation, due to impairment.

Pasquotank-Camden Emergency Management is responsible for maintaining the Special Needs Registry. Various agencies (i.e. DSS, Home Care Agencies, Agency on Aging, etc.) assist with the circulation of registry applications. Assistance may be received from the County GIS Departments for mapping purposes. Emergency Management volunteers and/or county/city employees may also assist with notifications to registrants during times of disasters. The Special Needs Registry is updated annually to ensure current contact and health information and to purge outdated registrations (10).

CIVIC ENGAGEMENT

Electoral Process

One measure of a population's engagement in community affairs is its participation in the electoral process. Tables 15 and 16 summarize current voter registration and historical voter turnout data. Note that turnout in any particular election is at least partially determined by the voters' interest and investment in the particular issues on the ballot at that time.

Registered Voters

- According to the State Board of Elections, the proportion of the voting age population registered to vote in Pasquotank County in 2012 was 100.6%, a phenomenon that occurs because of the source of the figures (see the footnote to the table, below).
- Approximately 40% of the registered voters in Pasquotank County were Black/African American, slightly higher than the proportion this racial group represented in the overall county population (37.8%) in 2010.

Table 15. Registered Voters, by Race/Ethnicity, Number and Percent (As of 12/29/12)

Location	Estimated Voting Age Population (2012)	Number and Percent of Voting Age Population Registered to Vote											
		Total		White		Black		American Indian		Hispanic		Other	
		No.[1]	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasquotank County	33,606	28,336	100.6	15,768	55.6	11,196	39.5	52	0.2	165	0.6	1,320	4.7
Regional Average	15,719	14,031	100.4	9,055	66.5	4,458	30.1	25	0.2	61	0.4	493	3.2
Scotland County	28,701	23,328	100.7	11,769	50.5	9,258	39.7	1,383	5.9	152	0.7	918	3.9
State of NC	7,351,323	6,624,136	101.7	4,698,878	70.9	1,489,770	22.5	53,833	0.8	114,149	1.7	381,654	5.8
Source:	a	b	c	b	c	b	c	b	c	b	c	b	c

[1] The total number of registered voters reported by the NC State Board of Elections is based on the sum of registrations by party affiliation, and does not necessarily equal the sum of registrations by race. Therefore, the sum of the percentages does not equal 100%.

a - Log Into North Carolina (LINC) Database, Topic Group Government, Voters and Elections, Voting Age Population (Data Item 1714), 2012; http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

b - NC State Board of Elections, Voter Registration, Voter Statistics, Voter Registration Statistics, By County; http://www.app.sboe.state.nc.us/webapps/voter_stats/.

c - Percentages are calculated

Voter Turnout

Note that voter turnout was higher in every jurisdiction cited in elections that included a presidential race (2004 and every four-years).

Table 16. Voter Turnout in General Elections (2004-2012)

Location	% Registered Voters that Voted				
	2004	2006	2008	2010	2012
Pasquotank County	56.00	26.00	64.66	34.91	61.96
Regional Average	58.57	35.29	68.67	44.37	65.81
Scotland County	57.00	41.00	62.01	37.96	61.60
State of NC	64.00	37.00	69.93	43.75	68.42

Source: NC State Board of Elections, Elections Central, Elections Results Data (years as noted), General Elections; http://www.sboe.state.nc.us/content.aspx?id=69.

RELIGIOUS LIFE

The fabric of a community is often maintained and repaired through its citizens' participation in organized religion. Increasingly, health and human service providers have come to realize that the faith community can be an important partner in assuring the health and well-being of at least its members if not larger segments of the population.

Table 17 lists the religious bodies in Pasquotank County. These data, gathered in January 2013, show that there is a range of options for exploring faith and religion within the county.

Table 17. Religious Bodies in Pasquotank County (January, 2013)

Religious Bodies	Number of Congregations	Number of Adherents
African Methodist Episcopal Zion Church	11	1,488
Assemblies of God	1	275
Bahai	0	8
Calvary Chapel Fellowship Churches	1	0
Catholic Church	1	1,545
Christian Church (Disciples of Christ)	3	283
Christian Churches and Churches of Christ	3	443
Church of God (Cleveland, Tennessee)	1	210
Church of God of Prophecy	1	35
Church of Jesus Christ of Latter-day Saints	2	938
Church of the Nazarene	1	81
Churches of Christ	1	36
Convention of Original Free Will Baptists	1	149
Episcopal Church	1	443
Evangelical Lutheran Church in America	1	159
Evangelical Methodist Church	1	0
International Pentecostal Church of Christ	1	125
International Pentecostal Holiness Church	2	550
Jehovah's Witness	1	0
National Missionary Baptist Convention, Inc.	1	182
Non-denominational	20	3,113
Presbyterian Church (U.S.A.)	1	147
Salvation Army	1	204
Seventh-Day Adventist Church	1	166
Southern Baptist Convention	12	4,761
United Holy Church of America, Inc.	1	0
United Methodist Church	7	2,656
United Pentecostal Church International	1	0
TOTAL	79	17,997

Source: Association of Religious Data Archives (ARDA), US Congregational Membership: Reports, County Membership Report, Browse Reports, Counties; http://www.thearda.com/rcms2010/.

COMMUNITY SERVICES AND ORGANIZATIONS

Law Enforcement

Elizabeth City is the only municipality in Pasquotank County that has its own police department. The rest of the county is covered by the Pasquotank County Sheriff's Office, headquartered in Elizabeth City.

Fire and Rescue Departments

The five fire departments that serve Pasquotank County are listed in Table 18. They include one full-time fire department in Elizabeth City and four volunteer fire departments in the outlying regions of the county. The Elizabeth City Fire Department serves the city and the Pasquotank Central Fire District from two stations in Elizabeth City. The Pasquotank County Fire Marshall is responsible of oversight of the municipal fire department and conducts all fire inspections and investigations. The office of the Pasquotank County Volunteer Fire Coordinator oversees the four volunteer fire departments (11,12).

Table 18. Fire Departments in Pasquotank County (February, 2013)

Department Name	Location
Elizabeth City Fire Department	Elizabeth City
Pasquotank-Newland Volunteer Fire Department	Newland
Pasquotank-Nixonton Volunteer Fire Department	Elizabeth City
Pasquotank-Providence Volunteer Fire Department	Weddington
Weeksville Volunteer Fire Department	Elizabeth City

Source: Fire Department Directory, North Carolina, Pasquotank County; http://firedepartmentdirectory.com/location/County-Fire-Departments.aspx?state=North%20Carolina&county=Pasquotank

Public Libraries

There are two public libraries that serve the people of Pasquotank County (13):

- The East Albemarle Regional Library (Elizabeth City) is the parent library organization for libraries in several communities across the Albemarle region. The local branch in Pasquotank County is known as the Pasquotank-Camden Library (Elizabeth City).

Elizabeth City/Pasquotank County Senior Center

The Senior Center is a 4400 square foot multi-purpose facility attached to the Knobbs Creek Recreation Center. The Center is handicapped accessible. It offers an administrative office, kitchenette, conference room, billiards room, exercise room, two craft/class rooms and a large, nicely furnished lounge. Two handicapped-accessible restrooms are located in the lounge area.

The multi-purpose Senior Center is designated as a “Community Focal Point on Aging.” The Administration on Aging defines/describes this as “a highly visible facility where anyone in the community can obtain information and access to aging services; to older people, it is a well-

known, accessible place to turn for information, services and opportunities; responds to their diverse needs and interests, enhances dignity, supports independence and encourages involvement within the Center and the community.

Services of the Senior Center include: monthly newsletter; information and referral assistance; recreation, educational, social and health promotion programming; free annual health screening; free bi-monthly blood pressure checks; fully equipped exercise room for cardiovascular fitness (treadmills, rowing machines, regular and recumbent stationary bicycles, stepper); billiards room with two eight-foot tables and all equipment; access to use of telephone, fax machine, television, VCR and computer with Internet; access to two daily newspapers, a variety of up-to-date magazines and a small library; and free coffee daily.

The range of activities sponsored by the Center includes: bingo; senior aerobics with a certified instructor; strength training and flexibility class with a certified instructor; monthly videos; recreation activities such as bowling, billiards, shuffleboard, croquet, horseshoes, table tennis, mini-golf, puzzles, card games, dominoes, Scrabble, checkers, and tournaments; Region R Senior Games and Silver Arts/Eastern Carolina Sportsfest; classes such as line dance, decorative painting, crafts, billiards, golf, AARP 55-Alive Mature Driving, etc.; covered dish luncheons, picnics, pizza parties, ice cream socials, watermelon socials, theme parties; Senior Citizens Club; Sassy Ole Seniors Line Dance Team; widowed persons and osteoporosis support groups; tours of local places of interest; and a variety of one-day, overnight and extended stay trips (14).

Other Community Services and Organizations

It is a nearly impossible task to create a print catalogue or listing of community resources that is current beyond its print date. Therefore, this CHA document provides instead *links* to on-line or telephone resources that provide information on community organizations and services available to Pasquotank County residents. These particular community resource directories and guides have been included because they are sponsored and/or maintained by entities likely to remain in existence, and because they cover a range of community resources.

[Note that Health and Health Care Resources, while included in some of the directories and guides cited below, are discussed in detail in a separate section of this CHA.]

Pasquotank County Community Resource Directories and Guides

Elizabeth City Chamber of Commerce

Extensive, categorized lists of businesses, services, organizations and things to do in Pasquotank County/Elizabeth City. Search banner heading tabs: Business Directory, Visit, and Live and Work.
Portal - http://www.elizabethcitychamber.org/.

Pasquotank County Government Directory of Services

Lists of live links to services provided by the county.
Portal: http://www.co.pasquotank.nc.us/.

Albemarle Smart Start Partnership Community Resource Guide

Searchable on-line directory of programs and services available throughout the Albemarle Region.
Currently catalogs annotated listings for 125 local and regional agencies and organizations.
Portal - http://www.albemarlessp.org/resource-guide.
Also available as a printable version at:
http://www.albemarlessp.org/sites/default/files/community-resource-guide.pdf.

North Carolina Arts Council

The NC Arts Council maintains a resource list of cultural, arts, and civic organizations that is searchable by county.
Currently catalogs 33 regional resources.
Portal: http://www.ncarts.org/county.cfm?county=Pasquotank.

CHAPTER TWO: SOCIOECONOMIC DATA

ECONOMIC CLIMATE

Tier Designation

The NC Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns a Tier Designation. The parameters included in the assignment include unemployment rate, median household income, population growth, and assessed property value per capita. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. The Tier system is incorporated into various state programs, including a system of tax credits (Article 3J Tax Credits) that encourage economic activity and business investment in less prosperous areas of NC. In 2013, Pasquotank County was assigned to Tier 2 and Scotland County was assigned to Tier 1 (15).

County Revenue Indicators

Local government in Pasquotank County tracks certain revenue indicators (e.g., building permits, sales, and receipts) in order to assess changes in the economic well-being of the community. Table 19 presents an annual summary of several of these indicators for FY2010-FY2012. These parameters are indicators of investment in buildings and lands, and in purchases of goods and services, and their growth could be considered a sign of confidence in the county's economic future. The revenues generated are available to fund county programs and services.

- The value of most kinds of residential building permits, retails sales tax revenue and occupancy tax collections all increased annually between FY2010 through FY2012, indicating perhaps that consumers felt increasingly comfortable spending family resources.
- The number and value of commercial building permits fell between FY2010 and FY2011; the value of commercial building permits recovered only partially in FY2012, indicating perhaps that businesses were being cautious about making capital investments in the community.

Table 19. Pasquotank County Revenue Indicators (FY2010-FY2012)

Revenue Indicator	FY2010		FY2011		FY2012	
	No. Permits	Value	No. Permits	Value	No. Permits	Value
Building Permits						
Single Familiy	28	$4,968,800	26	$4,479,925	36	$6,958,100
Single Family Additions	28	$579,300	28	$603,900	23	$764,250
Residential Modular	8	$1,199,400	4	$590,000	4	$625,100
Manufactured Homes	20	$1,120,183	31	$1,441,920	19	$961,400
Renovations	37	$388,327	36	$541,900	37	$563,072
Commercial	5	$2,390,860	3	$1,332,000	2	$1,750,000
Land Transfer Tax Collected	n/a	$747,129	n/a	$916,331	n/a	$789,443
Retail Sales Tax Received	n/a	$6,069,578	n/a	$6,299,533	n/a	$6,616,271
Occupancy Tax Collected	n/a	$442,090	n/a	$502,352	n/a	$570,171

Source: Rodney Bunch, Assistant County Manager, Pasquotank County Government. Personal communication to Amy Underhill, Health Promotion Coordinator, Albemarle Regional Health Services, February 8, 2013.

Income

While revenue indicators give us some idea of economic health from the community economic development standpoint, income measures tell us about the economic well-being of individuals in the community. Among the more useful income measures are personal income, family income, and household income. For comparison purposes, personal income is calculated on a per capita basis; family income and household income are viewed as a median value for a target population. The following are definitions of each of the three income categories:

- *Per capita personal income* is the income earned per person 15 years of age or older in the reference population.
- *Median household income* pertains to the incomes of all the people 15 years of age or older living in the same household (i.e., occupying the same housing unit) regardless of relationship. For example, two roommates sharing an apartment would be a household, but not a family.
- *Median family income* pertains to the income of all the people 15 years of age or older living in the same household who are related either through marriage or bloodline. For example, in the case of a married couple who rent out a room in their house to a non-relative, the household would include all three people, but the family would be just the couple.

Table 20 summarizes recent income data for Pasquotank County and its comparators. Among these jurisdictions:

- Pasquotank County had the lowest per capita and median household income figures among the comparators. The median per capita income in the county was over $5,000 lower than the state average per capita income, and roughly $400 lower than the regional average or the comparable figure in Scotland County. The median household income in Pasquotank County was more than $12,000 lower than the state average, more than $4,600 lower than the regional average, and $330 lower than the comparable figure in Scotland County.
- Median family incomes are higher in Pasquotank County and the ARHS region as a whole than in Scotland County or in NC as a whole. The median family income in Pasquotank County was $232 lower than the regional average, but almost $2,000 higher than the state average.

Table 20. Income Measures

Location	Per Capita Personal Income (2011)	Per Capita Income Difference from State	Estimated Median Household Income (2011)	Median Household Income Difference from State	Estimated Median Family Income (2010)	Median Family Income Difference from State
Pasquotank County	$18,694	-$5,261	$31,625	-$12,291	$54,785	$1,865
Regional Average	$19,135	-$4,820	$36,236	-$7,680	$55,017	$2,097
Scotland County	$19,100	-$4,855	$31,955	-$11,961	$37,323	-$15,597
State of NC	$23,955	n/a	$43,916 [1]	n/a	$52,920 [1]	n/a

[1] US Census Bureau, American Fact Finder, 2010 ACS 5-Year Estimate. http://factfinder2.census.gov.
Source (except as noted): NC Department of Commerce, AccessNC, Community Demographics, County Report, County Profile, http://accessnc.commerce.state.nc.us/EDIS/page1.html.

Employment

The following definitions will be useful in understanding the data in this section.

- *Labor force*: includes all persons over the age of 16 who, during the week, are employed, unemployed or in the armed services.
- *Unemployed*: civilians who are not currently employed but are available for work and have actively looked for a job within the four weeks prior to the date of analysis; also, laid-off civilians waiting to be called back to their jobs, as well as those who will be starting new jobs in the next 30 days.
- *Unemployment rate*: calculated by dividing the number of unemployed persons by the number of people in the civilian labor force.

Employment by Sector

Table 21 details the various categories of industry by sector in Pasquotank County and its three jurisdictional comparators for 2011, showing the number employed in each sector, the percentage of all employment that that number represents, and the average annual wage for people employed in each sector.

- The industry in Pasquotank County that employed the largest percentage of the workforce (18.55%) was Health Care and Social Assistance, with an annual wage per employee of $37,523.
- Retail trade accounted for the second largest percentage of the Pasquotank County workforce, at 16.05% ($22,396), followed in third place by Educational Services, at 14.68% ($33,923).
- In Scotland County, the sector employing the largest percentage of the workforce (18.13%, and an annual wage per employee of $38,453) also was Health Care and Social Assistance, followed by Manufacturing, (16.30% and $45,981), and Retail Trade (13.52% and $20,418).
- Region-wide, the sector employing the largest percentage of the workforce (17.30% and $29,459) was Health Care and Social Assistance, followed by Educational Services (14.16% and $34,771) and Retail Trade (13.22% and $20,787).
- Statewide, the sector employing the largest percentage of the workforce was Health Care & Social Assistance (14.3% and $42,811), followed by Manufacturing (11.6% and $52,613) and Retail Trade (11.5% and $24,650).
- The average annual wage per employee in Pasquotank County in 2011 was $32,149, $732 more than the average annual wage per employee in Scotland County, $1,938 more than the average region-wide, but $14,623 *less* than the average statewide.

Table 21. Insured Employment and Wages by Sector
(Annual Summary, 2011)

Sector	Pasquotank County			Scotland County			Regional Average			North Carolina		
	Avg. No. Employed	% Total Employment in Sector[1]	Average Annual Wage per Employee[1]	Avg. No. Employed	% Total Employment in Sector	Average Annual Wage per Employee	Avg. No. Employed	% Total Employment in Sector	Average Annual Wage per Employee	Avg. No. Employed	% Total Employment in Sector	Average Annual Wage per Employee
Agriculture, Forestry, Fishing & Hunting	144	0.91	$33,826	89	0.75	$24,302	956	2.94	$32,961	29,340	0.8	$28,752
Mining	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	3,378	0.1	$45,828
Utilities	*	n/a	*	*	n/a	*	8	0.02	n/a	13,917	0.4	$76,552
Construction	425	2.70	$29,590	365	3.06	$32,652	1,119	3.45	$29,678	194,022	5.0	$41,316
Manufacturing	698	4.43	$39,701	1,945	16.30	$45,981	1,326	4.08	$39,387	448,566	11.6	$52,613
Wholesale Trade	504	3.20	$37,081	192	1.61	$40,073	1,187	3.66	$37,610	167,533	4.3	$61,194
Retail Trade	2,531	16.05	$22,396	1,613	13.52	$20,418	4,292	13.22	$20,787	441,664	11.5	$24,650
Transportation & Warehousing	550	3.49	$50,529	323	2.71	$34,700	1,129	3.48	$40,975	125,395	3.3	$43,400
Information	136	0.86	$45,986	110	0.92	$44,503	217	0.67	$32,064	72,495	1.9	$63,833
Finance & Insurance	450	2.85	$45,351	227	1.90	$39,504	1,006	3.10	$39,722	149,135	3.9	$75,088
Real Estate & Rental & Leasing	137	0.87	$27,457	55	0.46	$26,592	635	1.96	$22,342	49,753	1.3	$38,476
Professional, Scientific & Technical Services	618	3.92	$46,589	138	1.16	$38,513	1,062	3.27	$43,178	180,237	4.7	$66,951
Management of Companies & Enterprises	53	0.34	$23,125	66	0.55	$46,577	53	0.16	$23,125	73,019	1.9	$88,763
Administrative & Waste Services	232	1.47	$20,420	771	6.46	$19,984	1,180	3.63	$29,725	212,177	5.5	$30,258
Educational Services	2,314	14.68	$33,923	1,360	11.40	$32,925	4,597	14.16	$34,771	382,110	9.9	$39,787
Health Care & Social Assistance	2,925	18.55	$37,523	2,163	18.13	$38,453	5,619	17.30	$29,459	552,337	14.3	$42,811
Arts, Entertainment & Recreation	92	0.58	$9,418	66	0.55	$14,931	341	1.05	$18,092	68,749	1.8	$28,474
Accommodation & Food Services	1,457	9.24	$11,992	1,071	8.98	$12,326	2,866	8.82	$12,263	346,059	9.0	$14,877
Other Services	493	3.13	$19,688	162	1.36	$19,450	1,136	3.50	$23,337	241,703	6.3	$43,641
Public Administration	2,008	12.74	$44,089	1,216	10.19	$33,627	3,747	11.54	$34,317	94,676	2.5	$28,182
Unclassified	*	n/a	*	n/a	n/a	n/a	0	0.00	n/a	9,010	0.2	n/a
TOTAL/AVERAGE ALL SECTORS	15,767	100.00	$32,149	11,932	100.00	$31,417	32,476	100.00	$30,211	3,855,275	100.0	$46,772

[1] Percent Total Employment in Sector values were calculated by dividing the Avg. Number of Employed within a sector by the total employees in All Sectors.
* Disclosure suppressed
Source: NC Employment Security Commission, Labor Market Information, Industry Information. Employment and Wages Data by Industry, 2011, Annual Summary. By State or by County; http://eslmi23.esc.state.nc.us/ew/EWYear.asp?Report=1. (Search tool inputs: Ownership type = aggregate of all types; Industry NAICS level = Sector (2 digit); both Employment and Wages.)

Largest Employers

Table 22 lists the largest 25 employers in Pasquotank County as of the end of the 3rd Quarter, 2011.

- One employer listed—Pasquotank County Board of Education—employed more than 1,000 people.
- The second largest employers were Albemarle Hospital, followed by Elizabeth City State University and the US Department of Homeland Security, each employing between 500 and 999 persons.

Table 22. Largest 25 Employers in Pasquotank County (Third Quarter, 2011)

Rank	Employer	Industry	No. Employed
1	Pasquotank County Board Of Education	Education & Health Services	1000+
2	Albemarle Hospital	Education & Health Services	500-999
3	Elizabeth City State University	Education & Health Services	500-999
4	U S Dept Of Homeland Security	Public Administration	500-999
5	Wal-Mart Associates Inc	Trade, Transportation & Utilities	250-499
6	State Of NC Dept Of Correction	Public Administration	250-499
7	College Of The Albemarle	Education & Health Services	250-499
8	County Of Pasquotank	Public Administration	250-499
9	District Health Dept Of Albemarle	Education & Health Services	250-499
10	City Of Elizabeth City	Public Administration	250-499
11	Ollie's Bargain Outlet	Trade, Transportation & Utilities	250-499
12	Lear Siegler Services Inc	Trade, Transportation & Utilities	100-249
13	Drs C3 & Aviation Company	Trade, Transportation & Utilities	100-249
14	Carolina Adventist Retirement	Education & Health Services	100-249
15	Food Lion Llc	Trade, Transportation & Utilities	100-249
16	Tandem Inc Dba Mcdonalds	Leisure & Hospitality	100-249
17	Dls Engineering Associates Inc	Professional & Business Services	100-249
18	Lowes Home Centers Inc	Trade, Transportation & Utilities	100-249
19	Bank Of Hampton Roads	Financial Activities	100-249
20	Kindred Nursing Centers East Llc	Education & Health Services	100-249
21	Farm Fresh	Trade, Transportation & Utilities	100-249
22	Craig Capital Corp Et Al	Manufacturing	100-249
23	YMCA Of South Hampton Roads	Other Services	50-99
24	Quality Foods From The Sea Inc	Manufacturing	50-99
25	J W Jones Lumber Co Inc	Manufacturing	50-99

Source: NC Department of Commerce, Economic Intelligence Development System (EDIS), Business Data, Top Employers, by County; http://accessnc.commerce.state.nc.us/EDIS/business.html.

Travel for Employment

Data gathered by the US Census Bureau on how many resident workers travel outside the county for employment can help demonstrate whether or not a county provides adequate employment opportunities for its own citizens. The economic impact of out-of-state employment is that those workers may pay taxes and spend part of their income out of state. Table 23 summarizes 2007-2011 estimated travel for employment data for Pasquotank County and its comparator jurisdictions.

- A majority—75%—of Pasquotank County resident workers were employed within the county.
- Of the 4,479 Pasquotank County resident workers who left the county for work, 2,780 worked out-of-state and 1,699 worked elsewhere in NC.
- In Scotland County, 71% of resident workers worked in-county; of the 3,366 who worked elsewhere, only 4% (482) worked out-of-state.
- Region-wide, only 45% of resident workers worked in-county; approximately 24% worked out-of-state.
- Statewide, roughly 72% of resident workers worked in their county of residence; 25% worked in another county, and less than 3% worked out-of-state.

Table 23. Place of Work for Resident Workers Over Age 16 (Five-Year Estimate, 2007-2011)

Location	Number and Percent of Residents										
	Total # Workers Over 16	# Working in NC	% Working in NC	# Working in County	% Working in County	# Working out of County	% Working out of County	# Working out of State	% Working out of State	Total # Leaving County for Work	Total % Leaving County for Work
Pasquotank County	18,062	15,282	84.6	13,583	75.2	1,699	9.4	2,780	15.4	4,479	24.8
Regional Average	8,155	6,265	75.6	4,236	44.8	2,029	30.8	1,890	24.4	3,919	55.2
Scotland County	11,605	11,123	95.8	8,239	71.0	2,884	24.9	482	4.2	3,366	29.0
State of NC	4,221,511	4,115,156	97.5	3,035,545	71.9	1,065,215	25.2	105,186	2.5	1170401	27.7

Note: percentages are calculated and may include some rounding error.
Source: US Census Bureau, American Fact Finder, 2011 ACS 5-Year Estimate, Table B08007: Sex of Workers by Place of Work, State and County Level; http://factfinder.census.gov.

Modes of Transportation to Work

Besides serving as an indicator of environmentalism, the mode of transportation workers use to get to their places of employment can also point to the relative convenience of local workplaces and the extent of the local public transportation system. Table 24 compares data on modes of transportation to work from the 2000 US Census and a 2011 Census Bureau estimate.

- Only small numbers of Pasquotank County workers used public transportation to get to work in either 2000 or 2007-2011, and the number decreased between the two periods. Use of public transportation for getting to work was not common in any of the jurisdictions being compared.
- The number of Pasquotank County workers who carpooled decreased between 2000 and 2007-2011. Carpooling also decreased in Scotland County and statewide over the same period, but increased slightly region-wide.
- The number of workers who walked to work decreased in all jurisdictions except NC.
- The number of Pasquotank County workers who worked at home increased by 132% between 2000 and 2007-2011. Working-at-home also increased in the other three jurisdictions as well.

Table 24. Modes of Transportation to Work
(2000 and 2007-2011 Five -Year Estimate)

Location	Number of Persons									
	Drove Alone		Carpooled		Used Public Transportation		Walked		Worked at Home	
	2000	2007-2011	2000	2007-2011	2000	2007-2011	2000	2007-2011	2000	2007-2011
Pasquotank County	10,926	14,213	2,493	2,370	213	43	422	318	220	511
Regional Average	5,233	6,065	1,185	1,249	49	36	166	135	164	220
Scotland County	11,431	9,815	1,809	1,142	19	29	258	141	247	331
State of NC	3,046,666	3,405,376	538,264	462,747	34,803	44,920	74,147	76,424	102,951	177,145
Source:	a	b	a	b	a	b	a	b	a	b

a - US Census Bureau, American Fact Finder, 2000 US Census Data Sets, Summary File 3, Detailed Tables, Means of Transportation to Work for Workers 16 Years and Over; http://factfinder.census.gov.
b - US Census Bureau, American Fact Finder, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder.census.gov.

Public Transportation in Pasquotank County

Public transportation in Pasquotank County is provided by the Inter-County Public Transportation Authority (ICPTA), operated by Albemarle Regional Health Services, which serves the five-county area of Camden, Chowan, Currituck, Pasquotank and Perquimans counties.

ICPTA's demand-response and subscription services are intended to assist the general public in accessing health and social services such as medical appointments and nutrition sites or attending activities related to daily living such as shopping, education, employment and recreation. Hours of operation are form 4:30 am - 7:30 pm, Monday through Friday, although it is possible to schedule transportation outside of this time frame with approval of management. While much travel is within the region, the service also transports passengers to other locations in NC and the Hampton Roads region of VA.

The ICPTA fleet of buses and vans are equipped with special features to transport the handicapped and the elderly; for example, vehicles are equipped with wheelchair lifts mounted at the rear and at the side for easy and safe loading and off- loading. Drivers are required to participate in road training, on-the-job training, emergency operating training, and periodic safety meetings (16).

According to data provided by ICPTA, in 2012 system demand-response and subscription service ridership totaled 104,095 passenger trips and covered 914,629 vehicle miles. Approximately 39,000 trips (37%) were provided under Medicaid or other contracts, including 7,149 DSS Medicaid or WorkFirst trips, 17,546 Senior Services trips, and 10,938 Mental Health trips. There also were 811 trips to parks and recreation sites and 2,247 trips to vocational workshops or the equivalent. Just over 13,500 trips involved mobility-impaired passengers (17).

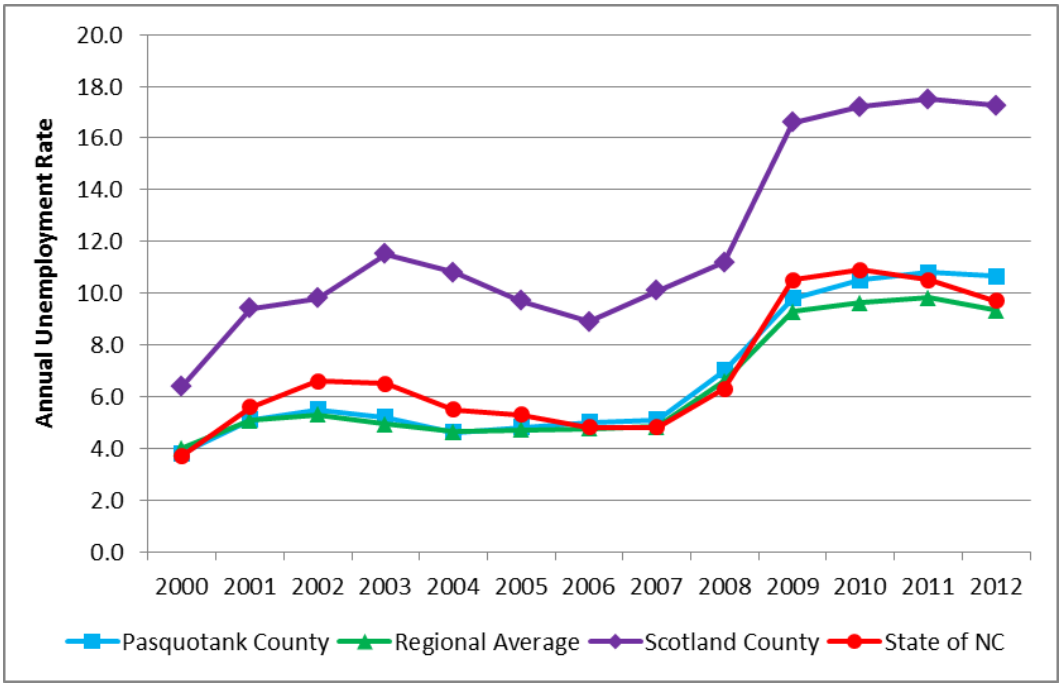
Unemployment

Figure 6 plots the unemployment rate in Pasquotank County and its jurisdictional comparators.

- Beginning with 2008 data, the unemployment rate began to rise sharply in all four jurisdictions. Unemployment began to decrease in Pasquotank County and in the region as a whole beginning in 2012. The decrease statewide began in 2011.

- In the last four years shown in the graph, the unemployment rate in Pasquotank County exceeded the comparable rate for the region; the county unemployment rate also exceeded the state rate in 2011 and 2012. Economic recovery apparently is lagging in Pasquotank County compared to the region and state as a whole.
- Throughout the period cited, the unemployment rate in Scotland County was the highest by far among the four jurisdictions.

Figure 6. Annual Unemployment Rate (2000-2012)



Note: 2012 figures represent the average monthly rate from January through September.
Source: NC Employment Security Commission, Labor Market Information, Workforce Information, Employed, Unemployed and Unemployment Rates, Labor Force Statistics, Single Areas for All Years; http://eslmi03.esc.state.nc.us/ThematicLAUS/clfasp/startCLFSAAY.asp.

Business Closings and Layoffs

In the past, the NC Employment Security Commission monitored business closings and layoffs across the state, by county. However, the ESC website recently posted the following announcement:

> *Due to the federal sequester legislation, the Mass Layoff Statistics program, funded by the US Department of Labor, has been eliminated. In addition, North Carolina's Department of Commerce will no longer support the collection and publication of Announced Business Closings and Layoffs effective May 1, 2013* (18).

The agency also has removed access to previously existing data on its website, so it is not possible to present business closings and layoffs for Pasquotank County in this report.

Poverty

The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold; this is the "100%-level" figure.

Table 25 shows the annual poverty rate for the period from 1970-2000 and the estimated poverty rate for two five year periods: 2006-2010 and 2007-2011. The data in this table describe an overall rate, representing the entire population in each geographic entity. As subsequent data will show, poverty may have strong racial and age components that are not discernible in these numbers.

- In Pasquotank County, the seven-county ARHS region and the state of NC, the poverty rate fell each decade from 1970 through 2000. The poverty rate *rose* in all three jurisdictions between 2006-2010 and 2007-2011.
- In Pasquotank County, the poverty rate for the period 2007-2011 (19.9%) was the highest since 1970.
- In the ARHS region, the average poverty rate remained at around 16.4% in 2000 and 2006-2010, but rose 7% to 17.5% in 2007-2011.
- The poverty rate in Scotland County was quite volatile over the entire period cited, and stood at 29.7% in 2007-2011, the highest rate for that county since 1970.

Table 25. Annual Poverty Rate
(1970-2000; 2006-2010 and 2007-2011 Five-Year Estimates)

Location	Percent of All People in Poverty					
	1970	1980	1990	2000	2006-2010	2007-2011
Pasquotank County	26.8	17.7	19.8	18.4	18.1	19.9
Regional Average	31.8	21.5	18.1	16.5	16.4	17.5
Scotland County	29.9	17.3	18.6	20.6	29.5	29.7
State of NC	20.3	14.8	13.0	12.3	15.5	16.1
Source:	a	a	a	a	b	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Item 6094); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.
b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.
c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.

Table 26 presents poverty data stratified by broad racial group (white/black). It is clear from these data that Blacks/African Americans have much higher poverty rates than whites.

- Across all time periods and in all jurisdictions cited in the table, the poverty rate among blacks was two to four times the poverty rate among whites.

Table 26. Persons in Poverty by Race
(2000; 2006-2010 and 2007-2011 Five-Year Estimates)

Location	2000			2006-2010			2007-2011		
	Total % in Poverty	% White in Poverty	% Black in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty
Pasquotank County	18.4	8.3	33.4	18.1	11.3	27.3	19.9	12.3	29.7
Regional Average	16.5	8.9	29.7	16.4	9.9	29.2	17.5	10.7	30.6
Scotland County	20.6	10.2	34.3	29.5	19.1	40.0	29.7	19.8	37.9
State of NC	12.3	8.5	22.9	15.5	11.2	25.6	16.1	11.8	26.1
	a	a	a	b	b	b	c	c	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6096, 6098); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.
b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.
c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.

Table 27 presents poverty data stratified by age group. From these data it is apparent that children suffer disproportionately from poverty.

- In all four jurisdictions in every time period cited in the table, the poverty rate for children under the age of 18 exceeded the overall poverty rate by from 16% to 75%, with the greatest average variance—47%—occurring in the ARHS region. The remaining average variances were 45% in Pasquotank County, 46% in Scotland County, and 35% in NC.

Table 27. Persons in Poverty by Age
(2000; 2006-2010 and 2007-11 Five-Year Estimates)

Location	2000			2006-2010			2007-2011		
	Total % in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty	Total % in Poverty	% Children Under 18 in Poverty	% Adults 65 or Older in Poverty
Pasquotank County	18.4	25.5	17.9	18.1	26.5	9.3	19.9	29.6	9.8
Regional Average	16.5	22.2	19.2	16.4	24.3	12.7	17.5	27.7	12.6
Scotland County	20.6	29.8	17.2	29.5	43.0	15.1	29.7	43.7	13.6
State of NC	12.3	15.7	13.2	15.5	21.3	10.7	16.1	22.6	10.3
Source:	a	a	a	b	b	b	c	c	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6100, 6102, 6104); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.
b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.
c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); http://factfinder2.census.gov.

Children Receiving Free or Reduced-price School Lunch

Other data corroborate the impression that children, especially the very young, bear a disproportionate burden of poverty, and that their burden is increasing. One measure of poverty among children is the number and/or percent of school-age children who are eligible for and receive free or reduced-price school lunch.

Students have to be eligible to receive meals; not everyone who is eligible will choose to enroll in the program and receive meals. To be eligible for *free* lunch under the National School Lunch Act students must live in households earning at or below 130 percent of the Federal poverty guidelines. To be eligible for *reduced-price* lunch students must live in households earning at or below 185 percent of the Federal poverty guidelines.

Tables 28 shows the percent of students *enrolled* to receive free or reduced-price lunch. The source for the data in the table is the national Annie E. Casey Foundation *Kids Count Data Center*. To help readers grasp the numbers behind the percentages in all jurisdictions, Table 29, based on data from the NC Department of Public Instruction, shows the number of students who *received* either free or reduced-price school lunch in several recent school years (SYs).

- The percentage of students in Pasquotank County enrolled for free or reduced-price school lunch appeared to vary without a clear pattern throughout the school years presented in the table. In SY2010-11, 58.9% of students were enrolled in the program; this figure was the highest since SY2005-2006.
- Free and reduced-price school lunch enrollment in the other jurisdictions also seemed to vary without a clear pattern. The percent of students eligible for free or reduced-price lunch statewide reached its highest over the period cited in SY2010-11.

Table 28. Percent of Students Enrolled for Free or Reduced-price School Lunch (SY2003-04 through SY2010-11)

Location	Percent Students Enrolled for Free or Reduced-Price Lunch							
	SY2003-04	SY2004-05	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11
Pasquotank County	59.3	59.8	59.6	57.6	55.7	56.7	58.5	58.9
Regional Average	54.8	54.2	54.7	53.0	52.0	52.4	55.9	54.8
Scotland County	71.0	69.4	73.4	70.8	69.4	72.4	77.9	77.0
State of NC	48.2	47.7	48.4	48.5	48.4	49.9	53.7	53.9

Source: Annie E. Casey Foundation, Kids Count Data Center, Data by State, North Carolina, Profiles (state and counties as noted), Other Education, Percent of Students Enrolled in Free and Reduced Lunch; http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=NC.

From the *counts* of students receiving free or reduced-price lunch presented in Table 29 it is perhaps more clear how the population using that benefit has grown over time.

- In Pasquotank County the number of students receiving free or reduced-price lunch increased only 1% between SY2006-07 and SY2011-12.
- Region-wide the comparable figure *increased* 9% between SY2006-07 and SY2011-12.
- Statewide, the number of students receiving free or reduced-price lunch increased 18% over the same period, with incremental increases every school year.

Table 29. Number of Students Receiving Free or Reduced-price School Lunch (SY2006-07 through SY2011-12)

Location	No. Students RECEIVING Free or Reduced-Price Lunch					
	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12
Pasquotank County	3,527	3,364	3,422	3,464	3,464	3,573
Regional Average	1,624	1,557	1,563	1,627	1,574	1,777
Scotland County	4,769	4,617	4,724	4,902	4,739	4,825
State of NC	671,831	679,877	703,887	752,708	759,361	793,893

Source: NC Department of Instruction, Data & Statistics, Other Education Data: Select Financial Data, Free and Reduced Meals Application Data (by school year). http://www.ncpublicschools.org/fbs/resources/data/.

County Economic Service Utilization

The Pasquotank County Department of Social Services (PCDSS) manages a number of programs that provide assistance to low-income people.

The *Food and Nutrition Services* (FNS) program (formerly known as Food Stamps) helps eligible households buy the food they need for a nutritionally adequate diet. Benefits may be used to purchase most foods at participating stores; they may not be used to purchase tobacco, pet food, paper products, soap products, or alcoholic beverages (19).

WorkFirst is North Carolina's Temporary Assistance for Needy Families (TANF) program, through which parents can get short-term training and other services, including cash supports, to help them become employed and self-sufficient. Most families have two years to move off WorkFirst Family Assistance (20).

Tables 30 and 31 present data on the economic services provided by PCDSS. Table 30 covers FNS; Table 31 covers WorkFirst.

- The number of FNS applications taken by PCDSS averaged 310 per month for the first eight months of 2012 (the last two months had irregular counts and were not included in the average.) Over the same period the average monthly FNS caseload was 3,967 (Table 30).

Table 30. Food and Nutrition Services Provided by Pasquotank County Department of Social Services (January, 2012 through October, 2012)

Program	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Applications Taken	355	270	299	282	284	316	330	345	64[2]	19[2]
Applications Processed	310	253	317	256	265	305	313	324	139[2]	30[2]
Reviews	366	386	485	378	425	387	361	447	373	492
Terminations/Changes	475	469	474	791	527	493	531	526	372	386
Total Caseload	3,967	3,949	4,019	3,963	3,910	3,963	3,963[1]	3,999	3,898[2]	4,222[3]

1 – June 2012 figure; state did not provide July 2012 caseload count
2 – Does not include cases entered through NCFAST
3 – Includes 474 cases in NCFAST
Source: Melissa Stokely, Pasquotank County Department of Social Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, December 3, 2012.

- The number of WorkFirst applications taken by PCDSS averaged 29 per month for the first ten months of 2012. Over the same period the average monthly WorkFirst caseload was 135 (Table 31).
- WorkFirst sometimes is not a very popular program due to stringent requirements once an individual enrolls. This may be why the total number of applications monthly seems relatively small given the known poverty in the community.

Table 31. WorkFirst Family Assistance Services Provided by Pasquotank County Department of Social Services (January, 2012 through October, 2012)

Program	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Applications Taken	28	21	23	27	27	31	27	32	39	33
Applications Processed	31	22	20	22	26	37	18	38	30	34
Reviews	6	9	4	7	11	6	8	10	3	7
Terminations/Changes	132	101	52	28	44	49	54	59	42	46
Total Caseload	147	144	140	134	134	134	122	133	132	134

Source: Melissa Stokely, Pasquotank County Department of Social Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, December 3, 2012.

HOUSING

Table 32 presents US Census Bureau data on housing by type.

- The percentage of vacant housing in Pasquotank County increased by 15% between the 2000 US Census and the 2006-2010 estimate.
- Of the occupied housing units in Pasquotank County, approximately 65% were owner occupied, 14% lower than the average owner occupancy region-wide (76%).
- The highest proportion of mobile homes in both periods (~26%) was in Scotland County.
- In 2000 the median monthly mortgage cost was highest statewide and second highest in Pasquotank County; in 2006-2010 the highest median monthly mortgage cost was in Pasquotank County. The lowest mortgage cost in both periods was in Scotland County.
- Median monthly mortgage cost in Pasquotank County increased by 55% between 2000 and 2006-2010.
- In 2000 the highest median gross monthly cost for rent was the state average; in 2006-2010 the highest comparable cost was in Pasquotank County.
- Median gross monthly rent cost in Pasquotank County increased by 49% between 2000 and 2006-2010.

Table 32. Housing by Type
(2000 and 2006-2010 Five-Year Estimate)

Location	2000												
	Total Housing Units	Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Median Monthly Housing Cost, Owner with Mortgage	Renter Occupied Units		Median Gross Monthly Rent	Mobile Home Units	
	No.	No.	%	No.	%	No.	%	$	No.	%	$	No.	%
Pasquotank County	14,289	1,382	9.7	12,907	90.3	8,478	65.7	$879	4,429	34.3	$493	2,249	15.7
Regional Average	7,696	1,362	16.8	6,334	83.2	4,715	76.9	$854	1,619	23.1	$464	1,781	24.3
Scotland County	14,693	1,294	8.8	13,399	91.2	3,649	78.6	$790	996	21.4	$433	3,552	24.2
State of NC	3,523,944	391,931	11.1	3,132,013	88.9	2,172,355	69.4	$985	959,658	30.6	$548	577,323	16.4
Source:	a	a	a	a	a	a	a	b	a	a	c	d	d

Location	2006-2010 Estimate												
	Total Housing Units	Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Median Monthly Housing Cost, Homes With Mortgage	Renter Occupied Units		Median Gross Monthly Rent	Mobile Home Units	
	No.	No.	%	No.	%	No.	%	$	No.	%	$	No.	%
Pasquotank County	16,833	1,877	11.2	14,956	88.8	9,753	65.2	$1,359	5,203	34.8	$733	2,470	15.0
Regional Average	9,242	1,786	17.5	7,456	82.5	5,467	75.3	$1,258	1,989	24.7	$714	1,972	22.9
Scotland County	15,193	1,579	10.4	13,614	89.6	8,679	63.7	$968	4,936	36.3	$561	4,157	28.7
State of NC	4,327,528	582,373	13.5	3,745,155	86.5	2,497,900	66.7	$1,244	1,247,255	33.3	$718	605,418	14.3
Source:	e	e	e	e	e	e	e	f	e	e	f	f	f

a - US Census Bureau, American FactFinder, 2000 US Census, Summary File 1 (SF-1), 2000 Demographic Profile Data, DP-1, Profile of General Population and Housing Characteristics: 2000 (geographies as listed); http://factfinder2.census.gov.
b - US Census Bureau, American FactFinder, 2000 US Census, Summary File 3 (SF-3), 100-Percent Data, Table H091, Median Selected Monthly Owner Costs (Dollars) for Specified Owner-Occupied Housing Units by Mortgage Status (geographies as listed); http://www.factfinder2.census/gov.
c - Log Into North Carolina, LINC Services; State and Counties: North Carolina and selected counties; Topic Group: Population and Housing; Housing Characteristics (Data Field V6115), 2000; http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show
d - US Census Bureau, American FactFinder, 2000 US Census, Summary File 3 (SF-3), Table QTH4, Physical Housing Characteristics - All Housing Units: 2000 (geographies as listed); http://www.factfinder2.census/gov.
e - US Census Bureau, American FactFinder, 2010 US Census, Summary File 1 (SF-1), 2010 Demographic Profile Data, DP-1, Profile of General Population and Housing Characteristics: 2010 (geographies as listed); http://factfinder2.census.gov.
f - US Census Bureau, American Fact Finder, 2010 ACS 5-Year Estimates, Table DP04: Selected Housing Characteristics (geographies as listed). http://factfinder2.census.gov.

Table 33 presents data on housing costs as a percent of household income.

- In both time periods cited, the percentage of *renter-occupied* housing units costing more than 30% of household income was highest in Pasquotank County, and the percentage increased <1% from one period to the next.
- In 2005-2009 the percentage of *mortgaged* housing units costing more than 30% of household income was highest in Pasquotank County and region-wide (tie); in 2006-2010 the highest percentage was in Pasquotank County.
- In Pasquotank County the percentage of mortgaged units costing more than 30% of household income increased 6% between intervals.

Table 33. Estimated Housing Cost as Percent of Household Income (2005-09 and 2006-2010 Five-Year Estimates)

Location	Renter Occupied Units						Mortgaged Housing Units					
	2005-2009			2006-2010			2005-2009			2006-2010		
	Total Units	Units Spending >30% Household Income on Housing		Total Units	Units Spending >30% Household Income on Housing		Total Units	Units Spending >30% Household Income on Housing		Total Units	Units Spending >30% Household Income on Housing	
		#	%		#	%		#	%		#	%
Pasquotank County	5,002	2,314	46.3	4,892	2,274	46.5	6,300	2,473	39.3	6,474	2,687	41.5
Regional Average	1,876	844	45.0	1,836	840	45.8	3,303	1,299	39.3	3,397	1,360	40.0
Scotland County	4,677	2,100	44.9	4,670	2,108	45.1	5,139	1,844	35.9	4,907	1,757	35.8
State of NC	1,131,480	486,934	43.0	1,157,690	513,340	44.3	1,634,410	513,340	31.4	1,688,790	535,120	31.7
Source	1	1	3	2	2	3	1	1	3	2	2	3

1 - US Census Bureau, American FactFinder. 2009 ACS 5-Year Estimates. Table DP04: Selected Housing Characteristics (geographies as listed). http://factfinder2.census.gov.
2 - US Census Bureau, American FactFinder. 2010 ACS 5-Year Estimates. Table DP04: Selected Housing Characteristics (geographies as listed). http://factfinder2.census.gov.
3 – Percentages are calculated.

Affordable Housing

According to information from the NC Rural Economic Development Center based on 2006-2010 US Census data estimates, 34% of housing in Pasquotank County was classified as "unaffordable", compared to 36% in Scotland County, and averages of 35% region-wide and 32% statewide (21). This data is at least partially reflective of the population living in households that pay more than 30% of the household income for housing costs.

The US Department of Housing and Urban Development (HUD) maintains a system for tracking "affordable" housing for its low-income clients, to whom it provides housing subsidies. HUD services are delivered through Public and Indian Housing Authority (PHA) offices throughout NC.

There is a PHA office in Elizabeth City (22). At the time this report was developed, there were 12 HUD-subsidized single-family homes available in Pasquotank County, all of them in Elizabeth City(23). Five low-rent apartment facilities were listed: one ARC facility for developmentally disabled persons in Elizabeth City, and three family apartment facilities and one facility for the elderly, all in Elizabeth City (24).

The US Department of Agriculture (USDA) catalogues information about rental properties available in rural areas. The agency's Multi-Family Housing (MFH) Rental website provides an online guide to Government assisted rental projects. At the time this report was developed, the MFH website listed four qualifying rental properties in Pasquotank County: Melbourne Apartments and Woodstock I, II, and III Apartments, all in Elizabeth City (25).

Homelessness

The NC Coalition to End Homelessness coordinates a statewide *Point-in-Time Count*, an unduplicated count of homeless people, held on one night in the last week of January each year. It is not clear which of the counties in the Albemarle region do or do not participate in this count, but results are available only for Pasquotank County, which reported 43 total homeless persons in 2011 and 36 in 2012. (26).

HOUSEHOLDS

Table 34 describes the number of persons living in households in the four comparator jurisdictions.

- The average number of persons per household in Pasquotank County—2.51—was higher than the state average but lower than the comparable figures for the region and Scotland County.
- The percent of one-person households in Pasquotank County—25.7%—was higher than the comparable figure region-wide but lower than in the other two jurisdictions.
- The percent of one-person households where the resident was age 65 or older in Pasquotank County—42.3%—was higher than the comparable state average and the figure for Scotland County, but lower than the average for the region.

Table 34. Household Characteristics (2010 US Census)

Location	Total No. Households[1]	Persons per Household	No. Households One-person	% Households One-person	No. Households One-person and Age ≥65	% Households One-person and Age ≥65
Pasquotank County	14,956	2.51	3,837	25.7	1,623	42.3
Regional Average	7,456	2.52	1,886	24.8	805	43.1
Scotland County	13,614	2.53	3,707	27.2	1,399	37.7
State of NC	3,745,155	2.48	1,011,348	27.0	341,864	33.8

1 - A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. (People not living in households are classified as living in group quarters.
Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics (geographies as noted); http://factfinder2.census.gov.

Single-Parent Families

Data in Table 35 describe some characteristics of single-parent families. In order to interpret the table please note the following definitions provided by the data source:

Family: A family consists of two or more persons, including the householder, who are related by birth, marriage, or adoption, and who live together as one household; all such persons are considered as members of one family. (Persons not in families and not inmates of institutions are classified as unrelated individuals.)

Families with Own Children: Families with their own children under age 18. An "own child" is a never-married child under 18 years who is a son, daughter, stepchild, or adopted child of the householder.

Female Householder Families with Children: Families with a female householder, with no husband present, and with their own children under 18.

Male Householder Families with Children: Families with a male householder, no wife present, and with their own children under 18.

Children Living with Both Parents: Children under 18 who live with both parents; own children of householders living in households that are classified as married-couple family households.

Children Not Living With Both Parents: Children under 18 who do not live with both parents. Includes children under 18 living: in a family with a male householder and no wife present, in a family with a female householder and no husband present, with other relatives, with nonrelatives, in group quarters, or, in some cases, living as householders themselves or as a spouse of a householder.

- In Pasquotank County the percent of children under the age of 18 *not* living with both parents increased by 7% (from 44.1% to 47.2%) between 2000 and 2010. Statewide the increase was 14% (from 35.5% to 40.4%).
- In Pasquotank County the percent of *female* family householders with children under the age of 18 decreased 17% (from 30.9% to 25.5%) between 2000 and 2010. Over the same period, the percent of *male* family householders with children under the age of 18 in Pasquotank increased 12% (from 5.7% to 6.4%). Statewide between 2000 and 2010 there was a decrease of 4% in the percent of female family householders with children (from 22.8% to 22.0%), and a 5% increase in the percent of male family householders with children (from, 6.1% to 6.4%).

Table 35. Single-Parent Families
(2000 and 2010)

Location	2000										
	Total Families	Total Families with Own Children	Female Family Householders with Children < 18		Male Family Householders with Children < 18		Total Children <18	Children <18 Living with Both Parents		Children <18 Not Living with Both Parents	
	Number	Number	Number	%	Number	%	Number	Number	%	Number	%
Pasquotank County	9,094	4,315	1,333	30.9	248	5.7	8,683	4,854	55.9	3,829	44.1
Regional Average	4,580	2,016	527	24.0	123	6.2	4,147	2,441	61.1	1,706	38.9
Scotland County	9,673	4,609	1,628	35.3	325	7.1	10,117	4,860	48.0	5,257	52.0
State of NC	2,158,869	995,648	227,351	22.8	60,791	6.1	1,964,047	1,266,526	64.5	697,521	35.5
Source:	a	a	a	b	a	b	b	a	b	a	b

Location	2010										
	Total Families	Total Families with Own Children	Female Family Householders with Children < 18		Male Family Householders with Children <18		Total Children <18	Children <18 Living with Both Parents		Children < 18 Not Living with Both Parents	
	Number	Number	Number	%	Number	%	Number	Number	%	Number	%
Pasquotank County	10,337	5,428	1,385	25.5	348	6.4	9,199	4,855	52.8	4,344	47.2
Regional Average	5,258	2,589	570	20.8	160	6.1	4,396	2,418	55.7	1,978	44.3
Scotland County	9,393	5,242	1,696	32.4	311	5.9	8,073	2,424	30.0	5,649	70.0
State of NC	2,499,174	1,331,533	292,504	22.0	85,199	6.4	2,281,635	1,359,045	59.6	922,590	40.4
Source:	a	a	a	b	a	b	b	a	b	a	b

a - Log Into North Carolina (LINC) Database, Topic Group Population and Housing (Data Items 6044, 6046, 6048, 6049, 6050, 6051), 2000 and 2010; http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.
b - Figures are calculated

Grandparents Responsible for Minor Children

Table 36 presents data on grandparents with responsibility for minor children. Data on grandparents as primary caregivers were derived from US Census Bureau American Community Survey questions. Data were collected on whether a grandchild lives with a grandparent in the household, whether the grandparent has responsibility for the basic needs of the grandchild, and the duration of that responsibility. Responsibility of basic needs determines if the grandparent is financially responsible for food, shelter, clothing, day care, etc., for any or all grandchildren living in the household. Percent is derived with the number of grandparents responsible for grandchildren (under 18 years) as the numerator and number of grandparents living with own grandchildren (under 18 years) as the denominator.

- In Pasquotank County for the period cited, an estimated 44.3% of grandparents living with their minor grandchildren were also responsible for their care.
- Among the jurisdictions being compared, the estimated percentage of grandparents living with and responsible for their minor grandchildren was highest in Scotland County; the figure for Pasquotank County was the lowest comparable figure.

Table 36. Grandparents with Responsibility for Minor Children (Five-Year Estimate, 2006-2010)

Location	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*	
		Est. #	%
Pasquotank County	1,022	453	44.3
Regional Average	450	225	47.5
Scotland County	1,391	972	69.9
State of NC	187,626	95,027	50.6

Source: US Census Bureau, American FactFinder, 2006-2010 American Community Survey 5-Year Estimates. Selected Social Characteristics in the United States (DP02); http://factfinder2.census.gov.

CHILD CARE

Child Care Facilities

The NC Division of Child Development is the state agency charged with overseeing the child care industry in the state, including the regulation of child day care programs. The Division licenses child care facilities that keep more than two unrelated children for more than four hours a day. In NC, regulated child day care facilities are divided into two categories—Child Care Centers and Family Child Care Homes—with the categories delineated on the basis of enrollment. A *child care center* is a larger program providing care for three or more children, but not in a residential setting. The number of children in care is based upon the size of individual classrooms and having sufficient staff, equipment and materials. A *family child care home* is a smaller program offered in the provider's residence where three to five preschool children are in care. A family child care home may also provide care for three school-age children (27).

In 1999, the NC Division of Child Development began issuing "star rated" licenses to all eligible Child Care Centers and Family Child Care Homes. NC's Star Rated License System gave from one to five stars to child care programs based on how well they were doing in providing quality child care. A rating of one star meant that a child care program met the state's minimum licensing standards for child care. Programs that chose to voluntarily meet higher standards could apply for a two to five star license. (Note: Religious-sponsored child care programs could opt to continue to operate with a notice of compliance and not receive a star rating.)

Three areas of child care provider performance were assessed in the star system: program standards, staff education, and compliance history. Each area had a range of one through five points. The star rating was based on the total points earned for all three areas.

Then, in 2005, the way facilities were evaluated was changed in order to give parents better information about a program's quality. The new rules made a 75% "compliance history" a minimum standard for any licensed facility. Because it is now a minimum requirement, all programs earn their star rating based only on the two components that give parents the best indication of quality: staff education and program standards. In addition, programs having a two component license can earn a "quality point" for enhanced standards in staff education and program standards.

According to data in Table 37:

- Of the 37 licensed child care centers in Pasquotank County at the time of the report, eight (22%) were five-star facilities and two (5%) were four-star facilities.
- Of the 23 licensed family child care homes in Pasquotank County, there were no five-star facilities; four (17%) were four-star facilities and one (4%) was a three-star facility.

Table 37. NC-Licensed Child Care Facilities in Pasquotank County (November, 2012)

Type of Facility	Number
Child Care Centers (37)	
Five-star	8
Four-star	2
Three-star	18
Two-star	3
One-star	2
GS 110-106 (Church-affiliated)	2
Temporary	2
Family Child Care Homes (23)	
Five-star	0
Four-star	4
Three-star	1
Two-star	9
One-star	9

Source: NC Department of Health and Human Services, Division of Child Development, Child Care Facility Search Site; http://ncchildcaresearch.dhhs.state.nc.us/search.asp

Table 38 presents total enrollment summaries for child care facilities. In Pasquotank County enrollment appeared to be increasing in Child Care Centers, and decreasing in Family Care Homes.

Table 38. Children Enrolled in NC-Regulated Child Care (2008-2011)

Location	No. Children (0-5) Enrolled in Child Care Centers				No. Children (0-12) Enrolled in Family Care Homes			
	2008	2009	2010	2011	2008	2009	2010	2011
Pasquotank County	1,014	1,025	1,104	1,351	127	105	114	93
Regional Average	347	355	351	428	45	45	45	41
Scotland County	797	744	806	745	108	101	93	88
State of NC	172,717	168,953	169,852	194,632	15,354	14,936	14,384	13,321

Source: Annie E. Casey Foundation, Kids Count Data Center, Community Level Data, North Carolina Indicators; http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=NC.

The WorkFirst Employment Program discussed previously includes child care subsidies for families that qualify. Table 39 presents the number of children in each jurisdiction that received WorkFirst Working Connections Child Care Subsidies.

- The number of children in Pasquotank County that received a WorkFirst child care subsidy decreased steadily over the period cited, as did the comparable figures for the region and Scotland County.
- In each jurisdiction, including the state of NC, the figures were their lowest of the entire period in 2010.

Table 39. Number of Children Receiving WorkFirst Child Care Subsidy (2007-2010)

Location	2007	2008	2009	2010
Pasquotank County	265	336	219	186
Regional Average	110	118	91	77
Scotland County	594	583	524	477
State of NC	41,075	43,124	42,944	39,341

Note: the number of children is based on the number of children under 18 receiving Work First benefits for the month of December for a particular year.
Source: Annie E. Casey Foundation, Kids Count Data Center, Community Level Data, North Carolina Indicators; http://datacenter.kidscount.org/data/bystate/chooseindicator.aspx?state=NC.

EDUCATION

Higher Education

There is one four-year university physically located in the county, and several other institutions of higher learning in the county and elsewhere in the northeast NC region accessible to Pasquotank County residents. In addition, there are numerous colleges and universities relatively close at hand in the Tidewater region of southeast VA.

College of the Albemarle

The College of The Albemarle (COA) is a community college that serves northeastern NC with sites in several locations throughout the region, including a campus in Edenton, one in Elizabeth City, and a third in Manteo. A comprehensive community college, COA offers two-year degrees in college transfer and career programs, basic skills programs, continuing education classes for personal enrichment as well as credit, customized business and industry training, and cultural enrichment opportunities including an annual summer program called College for Kids. The COA is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees (28).

Roanoke-Chowan Community College

Roanoke-Chowan Community College (RCCC) is a regional community college located in Ahoskie, NC (Hertford County). The College currently has about 20 curricular programs in which students may seek degrees, diplomas and short term skills-based certificates. RCCC recently added an Associate of Fine Arts Degree in Visual Arts, in addition to diplomas in high demand occupational training in Building Construction, Plumbing and other construction-related technologies. The College offers a Lateral Entry Teacher Certificate tailored to meet the need of public schools within the region to fully credential educators who have entered the classroom without the advantage of full unrestricted licensure.

RCCC has established formal transfer agreements with the 16-member University of North Carolina System and several private colleges to provide transfer opportunities for students to pursue higher-level degrees. RCCC has expanded its distance learning studies to include Internet-based courses, and has increased efforts with area school systems to provide more opportunities for high school students to take college courses, either on the RCCC campus or at their respective high schools.

The RCCC Continuing Education and Workforce Development Division meets business needs by establishing basic or occupation-related classes within local industries and by developing Focused Industrial Training (FIT) opportunities. Its Small Business component works on a one-on-one basis with individuals and small companies wanting to start and or enhance a small business enterprise. The Hertford County JobLink Career Center is also located on the RCCC Campus (29).

Chowan University

Chowan University is a small (~1,300 students) four-year liberal arts university located in Murfreesboro, NC (Hertford County). Chowan University is affiliated with the Southern Baptist Association. The university offers over 63 academic programs and the recently-opened School

of Graduate Studies provides students the opportunity to earn Masters Degrees. Currently, Chowan offers the Master of Education (M.Ed.) degree with advanced teacher license.

Chowan University enrolls about 30 adult students in the Adult Degree Completion Program. Through this program, adult students take classes at Halifax Community College in Weldon, NC, at the main campus in Murfreesboro, NC, and online.

The Chowan University student/faculty ratio is 16:1, with an average class size of 15. The university has a campus-wide fiber-optic network and Blackboard communication system, computer labs, "smart" multimedia classrooms, hardware and software discounts, in-house technical support, and 24/7 high-speed Internet access (30).

Martin Community College

Martin Community College (MCC) is a regional community college located in Williamston, NC (Martin County) with a satellite campus located in Windsor. MCC provides adult basic education, adult high school education, extension classes, and selected curriculum courses in 20 vocational and technical areas. MCC also offers an Associate in Arts College Transfer Program and a Transfer Core Diploma. The college offers online curricular and continuing education classes via a system called *ed2go* (31).

Mid-Atlantic Christian University

Today's Mid Atlantic Christian University, located in Elizabeth City, was founded in 1948 as Roanoke Bible College by Churches of Christ in Eastern North Carolina in order to train ministers who had no Biblical college preparation.

Today's Mid-Atlantic Christian University is an undergraduate institution of Christian higher education organized academically into two schools: the School of Undergraduate Studies (offering BA and BS degrees in Biblical and theological studies and general studies) and the School of Professional Studies (offering degrees in Christian Ministries and Family Studies). MACU supports a strong service learning program (32).

Elizabeth City State University

Elizabeth City State University (ECSU) is a four-year state university located in Elizabeth City, NC (Pasquotank County). Originally an institution for African-American students, the university now has an increasingly multicultural student body. In the fall of 2012, ECSU had a total enrollment of 2878. A constituent institution of The University of North Carolina System, ECSU offers 37 baccalaureate degrees and four master's degrees in four academic schools: Arts and Humanities; Business and Economics; Education and Psychology; and Mathematics, Science and Technology. The university has academic programs that appeal to various interests and fields of study, including the honors program, military science, study abroad, Viking Fellows for education majors, and "signature" programs in aviation and pharmacy (33).

East Carolina University

East Carolina University (ECU) is a large, four-year state university located in Greenville, NC (Pitt County). ECU is a constituent member of the UNC System founded in 1907 to alleviate the desperate shortage of teachers in the eastern part of NC. Since then, the ECU College of Education has been joined by programs of high distinction in health care and the fine and performing arts. Today the university offers over 100 bachelor's degree programs, more than 70 master's degree programs, four specialist degree programs, an MD program, and 16 doctoral programs. The university is the largest educator of nurses in NC, and its Brody School of Medicine is consistently ranked among the top medical schools in the nation that emphasize primary care. The school was recently ranked second in the nation by the American Academy of Family Physicians for productivity of family physicians.

ECU is the state's leader in distance education, offering more than 60 degrees and certificate programs in subjects such as business, education, health care, and technology. Two of the top distance-education programs in the nation are run by ECU's colleges of nursing and education (34).

Primary and Secondary Education

Schools and Enrollment

Tables 40 through 48 focus on data pertaining to primary and secondary (mostly public) schools in Pasquotank County (as well as its comparator jurisdictions where appropriate).

- There are 11 public schools in the Elizabeth City-Pasquotank County school district: seven elementary schools, two middle schools, and two secondary schools. Additionally, there is one alternative school (not shown in the table) in the district. There also are five private schools in the county (Table 40).

Table 40. Number of Schools (SY2011-12)

Location	Public				Private			
	Elementary (PK-8)	Middle (4-8)	Secondary (9-12)	Combined	K-12	K-9/8	9-12	Other
Elizabeth City-Pasquotank Public Schools	7	2	2	0	2	2	0	1
Regional Total	25	10	12	0	5	2	0	2
Source:	a	a	a	a	b	b	b	b

a - NC Department of Public Instruction, NC School Report Cards, Search by School District. http://www.ncreportcards.org/src/main.jsp?pList=1&pYear=2011-2012.
b - Private School Review, North Carolina Private Schools, Search by Zip Code; http://www.privateschoolreview.com/find_schools.php.

- Northeastern High School in Elizabeth City was the largest school in the district, with a SY2011-12 enrollment of 837. Pasquotank County High School, also in Elizabeth City, was the second largest school in the district, with a SY2011-12 enrollment of 735. (Table 41).

Table 41. Elizabeth City-Pasquotank County Public Schools (November, 2012)

School	Location	School Type/Calendar	Grade Range	Enrollment SY2011-12
Central Elementary	Elizabeth City	Regular School, Traditional Calender	K-5	410
Elizabeth City Middle	Elizabeth City	Regular School, Traditional Calender	6-8	671
HL Trigg Community	Elizabeth City	Alternative Education, Traditional Calendar	6-12	75
JC Sawyer Elementary	Elizabeth City	Regular School, Traditional Calender	K-5	426
Northeastern High	Elizabeth City	Regular School, Traditional Calender	9-12	837
Northside Middle	Elizabeth City	Regular School, Traditional Calender	K-5	544
PW Moore Elementary	Elizabeth City	Regular School, Traditional Calender	K-5	351
Pasquotank County High	Elizabeth City	Regular School, Traditional Calender	9-12	735
Pasquotank Elementary	Elizabeth City	Regular School, Traditional Calender	K-5	286
River Road Middle	Elizabeth City	Regular School, Traditional Calender	6-8	714
Sheep-Harney Elementary	Elizabeth City	Regular School, Traditional Calender	PK-5	331
Weeksville Elementary	Elizabeth City	Regular School, Traditional Calender	K-5	412

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards, School Year 2009-10; http://www.ncschoolreportcards.org/src.

- K-12 public school enrollment in Pasquotank County declined every year between SY2006-07 and SY2009-10 before rebounding some in SY2010-11 and more in SY2011-12; a similar pattern occurred across the ARHS region, with continuous enrollment declines from SY2007-08 through SY2010-11 (Table 42).
- The two private schools in Pasquotank County enrolled a total of 414 students in SY2009-10 (35).

Table 42. K-12 Public School Enrollment (SY2005-06 through SY2011-12)

Location	Number of Students						
	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12
Elizabeth City-Pasquotank Public Schools	6,399	6,486	6,341	6,320	6,140	6,151	6,455
Regional Average	3,210	3,212	3,150	3,101	3,038	3,017	3,122
State of NC	1,428,912	1,452,420	1,458,156	1,456,558	1,446,650	1,450,435	n/a
	a	a	a	a	a	a	b

Note: this data excludes charter school enrollment.
a - NC Department of Public Instruction, Data and Statistics, Education Data: NC Statistical Profile. NC Statistical Profile Online: Local Education Agencies Information, Pupil Accounting. http://apps.schools.nc.gov/pls/apex/f?p=1:1:497147721913602.
b - NC Department of Public Instruction, Data and Statistics, Education Data: Attendance and Membership Data. Principals Monthly Report. Month 1 for each school year, then look for the appropriate LEA by number. http://www.ncpublicschools.org/fbs/accounting/data/.

Educational Attainment

Table 43 presents data on several measures of educational attainment.

- As of a 2006-2010 US Census Bureau estimate, Pasquotank County had the second-highest percentages of both high school graduates and residents with a bachelor's degree or higher among the four jurisdictions being compared.
- According to SY2011-12 End of Grade (EOG) Test results, significantly lower percentages of third graders in Pasquotank County public schools demonstrated grade-appropriate proficiency in both reading and math than students in the other three jurisdictions. End of Grade test performance among Pasquotank County eighth graders was better, but still second-lowest or lowest among the comparators.

- The average SAT score in Pasquotank County was 905, 9% lower than the state average. Region-wide, the average score (956) was 4% lower than the average score statewide of 997.

Table 43. Educational Attainment

Location	% Population High School Graduate or Higher	% Population Bachelor's Degree or Higher	% 3rd Graders At or Above Grade Level, ABCs EOG Reading Test	% 3rd Graders At or Above Grade Level, ABCs EOG Math Test	% 8th Graders At or Above Grade Level, ABCs EOG Reading Test	% 8th Graders At or Above Grade Level, ABCs EOG Math Test	SAT Participation Rate	Average Total SAT Scores
	2010	2010	SY2011-12	SY2011-12	SY2011-12	SY2011-12	SY2011-12	SY2011-12
Pasquotank County	81.9	18.7	59.3	73.0	63.9	74.1	61%	905
Regional Average	81.8	15.6	68.4	80.2	70.2	87.6	60%	956
Scotland County	75.2	14.0	67.0	87.9	60.9	85.9	59%	844
State of NC	83.6	26.1	68.8	82.8	71.1	85.2	68%	997
Source:	a	a	b	b	b	b	b	b

a - US Census Bureau, American Fact Finder, American Community Survey, 2006-2010 American Community Survey (ACS) 5-Year Estimates, Data Profiles, Detailed Tables, Selected Social Characteristics, Educational Attainment, by State or County; http://factfinder.census.gov.
b - NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. District Profile. http://www.ncreportcards.org/src/.

Educational Expenditures

Table 44 presents data on local, state and federal expenditures on public education.

- In the 2011-12 school year the total per pupil expenditure (the sum of Federal, state and local investments) in Pasquotank County ($9,137) was 5% lower than the average for the ARHS region ($9,645), but 9% higher than the average for the state as a whole ($8,417).
- In all jurisdictions, the state contributed the highest proportion to the total per-pupil expenditure: 64% in Pasquotank County, an average of 69% region-wide, and an average of 64% statewide.

Table 44. Educational Expenditures (SY2011-12)

Location	Per-Pupil Expenditure			
	Local	State	Federal	Total
Elizabeth City-Pasquotank Public Schools	$1,890	$5,853	$1,394	$9,137
Regional Average	$1,698	$6,655	$1,292	$9,645
State of NC	$1,904	$5,355	$1,158	$8,417

Source: NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. District Profile. http://www.ncreportcards.org/src/.

High School Drop-Out Rate

Table 45 presents data on the high school (grades 9-12) drop-out rate. According to the NC Department of Public Instruction, a "drop-out" is any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school. For reporting purposes, a drop-out is a student who was enrolled at some time during the previous school year, but who was not enrolled (and who does

not meet reporting exclusions) on day 20 of the current school year. The data below is specific to high school students.

- The high school drop-out rate in Pasquotank County decreased steadily after SY2005-06, to a low of 2.16 in SY2010-11.
- From SY2007-08 through SY2010-11 the drop-out rate in Pasquotank County was the lowest among the three jurisdictions.

Table 45. High School Drop-Out Rate (SY2004-05 through SY2010-11)

Location	Drop-Out Rate						
	SY2004-05	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11
Elizabeth City-Pasquotank P	5.52	5.76	5.19	4.26	2.94	2.62	2.16
Regional Average	4.90	4.94	4.38	4.78	3.65	3.42	3.53
State of NC	4.74	5.04	5.27	4.97	4.27	3.75	3.43

a - NC Department of Public Instruction, Research and Evaluation, Dropout Data and Collection Process, Annual Dropout Reports; http://www.ncpublicschools.org/research/dropout/reports/.

Graduation Rate

The four-year cohort graduation rates for subpopulations of 9th graders entering high school in SY2008-09 and graduating in SY2011-12 are presented in Table 46.

- The graduation rates in all categories were highest among the comparators in Elizabeth City-Pasquotank County Schools.

Table 46. Four Year Cohort Graduation Rate (9th Graders Entering SY2008-09 and Graduating SY2011-12 or Earlier)

Location	All Students			Male			Female			Economically Disadvantaged		
	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating
Elizabeth City-Pasquotank P	414	348	84.1	209	167	79.9	205	181	88.3	198	163	82.3
Regional Average	214	175	82.4	113	88	77.2	100	88	87.9	107	84	78.9
State of NC	110,886	89,187	80.4	56,675	43,348	76.5	54,211	45,839	84.6	48,553	36,268	74.7

Note: subgroup information is based on data collected when a student is last seen in the cohort
Source: Public Schools of North Carolina, Cohort Graduation Rate. 4-Year Cohort Graduation Rate Report, 2008-09 Entering 9th Graders Graduating in 2011-12 or Earlier. http://www.ncpublicschools.org/accountability/reporting/cohortgradrate.

School Crime and Violence

Along with test scores and dropout rates, schools now also track and report acts of crime and violence that occur on school property.

The NC State Board of Education has defined 17 criminal acts that are to be monitored and reported, ten of which are considered dangerous and violent:

- Homicide
- Assault resulting in serious bodily injury
- Assault involving the use of a weapon
- Rape

- Sexual offense
- Sexual assault
- Kidnapping
- Robbery with a dangerous weapon
- Robbery without a dangerous weapon
- Taking indecent liberties with a minor

The other seven criminal acts are:

- Assault on school personnel
- Bomb threat
- Burning of a school building
- Possession of alcoholic beverage
- Possession of controlled substance in violation of law
- Possession of a firearm or powerful explosive
- Possession of a weapon

Table 47 summarizes crime and violence catalogued by the NC Department of Public Instruction for schools in Pasquotank County, the ARHS region, Scotland County, and the state overall.

- The number and rate of acts of school crime and violence in Elizabeth City-Pasquotank Schools and the other jurisdictions fluctuated dramatically over the period cited. Only the statewide average showed any stability, likely due to the large size of the sample. The state rate increased in the two most recent school years cited.

Table 47. School Crime and Violence Trend (SY2004-05 through SY2010-11)

Location	SY2004-05		SY2005-06		SY2006-07		SY2007-08		SY2008-09		SY2009-10		SY2010-11	
	No. Acts[1]	Rate[2]	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate	No. Acts	Rate
Elizabeth City-Pasquotank	24	4.1	26	4.3	44	7.2	15	2.5	26	4.3	16	2.7	29	4.9
Regional Average	12	4.4	14	4.8	17	5.5	21	7.6	19	6.0	14	5.0	16	4.6
Scotland County Schools	34	5.1	38	5.7	47	7.0	30	4.5	25	3.8	44	7.0	47	7.6
State of NC	10,107	7.5	10,959	7.9	11,013	7.8	11,276	7.9	11,116	7.6	11,608	8.0	11,657	8.0
Source	a	a	a	a	a	a	b	b	b	b	b	b	b	b

[1] For list of reportable acts see accompanying text

[2] Rate is number of acts per 1,000 students

a - NC Department of Public Instruction, Research and Evaluation, Discipline Data, Annual Reports, Annual Reports of School Crime and Violence (years as noted); http://www.ncpublicschools.org/research/discipline/reports/#consolidated.

b - NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports. Crime & Violence Table C-5. http://www.ncpublicschools.org/research/discipline/reports/#consolidated.

Table 48 presents data summarizing disciplinary activity in the public schools. Since the data represent counts of activity of school systems of different sizes, direct comparisons are problematic.

- In all the school systems under comparison the most common disciplinary activity was the short-term suspension. Long-term suspensions and expulsions were invoked more frequently in Pasquotank County than in Scotland County.

Table 48. School Disciplinary Activity (SY2008-09 through SY2010-11)

School System	SY2008-09			SY2009-10			SY2010-11		
	No. Short-Term Suspensions	No. Long-Term Suspensions	No. Expulsions	No. Short-Term Suspensions	No. Long-Term Suspensions	No. Expulsions	No. Short-Term Suspensions	No. Long-Term Suspensions	No. Expulsions
Elizabeth City-Pasquotank Public Schools	1898	28	2	1968	34	3	1807	25	0
Regional Average	570	10	0	584	8	1	570	6	0
Scotland County Schools	2659	26	0	2470	17	0	2123	11	0
State of NC	293,453	3,592	116	277,206	3,368	88	262,858	2,586	59

[1] A short-term suspension is up to 10 days.

[2] A long term suspension is 11 or more days.

Source - NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports (years as noted); http://www.ncpublicschools.org/research/discipline/reports/#consolidated.

CRIME AND SAFETY

Crime Rates

All crime statistics reported below were obtained from the NC Department of Justice, State Bureau of Investigation unless otherwise noted.

Index crime is composed of *violent crime* and *property crime*. Violent crime includes murder, forcible rape, robbery, and aggravated assault; property crime includes burglary, larceny, arson, and motor vehicle theft.

Table 49 presents the rates for index crime, violent crime, and property crime for the period from 2007 through 2011.

- Among the comparators, Scotland County had the highest index crime rate throughout the period cited.
- The index crime rate in Pasquotank County was lower than the state rate but higher than the regional rate throughout the period cited.
- The index crime rate in Pasquotank County fell between 2007 and 2010 before rising in 2011.
- The largest component of index crime in all four jurisdictions was property crime.
- The highest violent crime rates were in Pasquotank County in 2007 and 2008 and in Scotland County in 2009-2011,

Table 49. Crime Rates, Crimes per 100,000 Population (2007-2011)

Location	Crimes per 100,000 Population														
	2007			2008			2009			2010			2011		
	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime
Pasquotank County	4,027.3	562.5	3,464.8	3,870.2	593.7	3,276.5	3,257.6	418.1	2,839.5	3,134.0	467.8	2,666.1	3,269.4	403.4	2,865.9
Regional Average	2,212.1	208.9	2,003.1	2,400.3	266.4	2,133.9	2,237.1	231.7	2,005.4	2,191.1	211.0	1,980.1	2,512.8	196.6	2,316.2
Scotland County	4,710.4	398.2	4,312.2	5,536.7	540.8	4,995.8	5,287.6	562.3	4,725.4	4,981.5	505.9	4,475.6	5,498.7	479.1	5,019.5
State of NC	4,658.9	480.2	4,178.7	4,554.6	474.2	4,080.4	4,178.4	417.2	3,761.2	3,955.7	374.4	3,581.4	3,919.8	354.6	3,565.2

* - Indicates incomplete or missing data.
Source: NC Department of Justice, State Bureau of Investigation, Crime, View Crime Statistics, Crime Statistics (by Year); http://ncdoj.gov/Crime/View-Crime-Statistics.aspx.

Table 50 presents detail on index crime committed in Pasquotank County from 2006-2011. Note the following definitions:

Robbery: larceny by the threat of violence;
Aggravated assault: a physical attack on another person which results in serious bodily harm and/or is made with a deadly or dangerous weapon such as a gun, knife, sword, ax or blunt instrument;
Burglary: unlawful breaking and entering into the premises of another with the intent to commit a felony;
Larceny: the theft of property without use of force; and
Motor vehicle theft: the theft or attempted theft of a motor vehicle

- The predominant violent crime reported in every year cited was aggravated assault.
- Larceny was the predominant property crime reported in every year cited

Table 50. Types of Crimes Reported in Pasquotank County (2006-2011)

Type of Crime	Number of Crimes					
	2006	2007	2008	2009	2010	2011
Violent Crime						
Murder	8	2	1	0	6	4
Rape	12	12	13	15	8	6
Robbery	57	52	74	41	39	26
Aggravated Assault	93	159	155	117	143	128
Property Crime						
Burglary	502	413	379	339	332	340
Larceny	939	903	919	799	755	792
Motor VehicleTheft	75	67	43	37	30	33
Total Index Crimes	1,686	1,608	1,584	1,348	1,313	1,329

Source: NC State Bureau of Investigation, Crime in North Carolina, North Carolina Crime Statistics, Crime Statistics in Detailed Reports (By Year), 2011 Annual Reports, County Offenses Ten Year Trend, http://crimereporting.ncdoj.gov/ ,

Other Criminal Activities

Table 51 summarizes data on other types of criminal activities.

- As of January 2, 2013 there were 59 registered sex offenders in Pasquotank County, compared to 90 in Scotland County. The regional average was 32.
- According to the NC Governor's Crime Commission, in 2012 there were nine gangs in Pasquotank County, and none in Scotland County. The same year, the Crime Commission sited a total of 963 gangs statewide.
- According to the NC State Bureau of Investigation, there were two methamphetamine drug lab busts in Pasquotank County during the period from 2005 through 2011. Over the same period, 1,664 meth lab busts were recorded statewide.

Table 51. Other Criminal Activity

Location	No. Registered Sex Offenders (1/2/13)	No. Gangs	No. Methamphetamine Lab Busts						
		2012	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	59	9	0	1	0	1	0	0	0
Regional Average	32	2	0	0	0	0	0	0	0
Scotland County	90	0	0	0	0	0	0	0	1
State of NC	14,028	963	328	197	157	197	206	235	344
Source:	a	b	c	c	c	c	c	c	c

a - NC Department of Justice, Sex Offender Statistics, Offender Statistics; http://sexoffender.ncdoj.gov/stats.aspx.
b - NC Department of Crime Control and Public Safety, Governor's Crime Commission, Publications. Gangs in North Carolina: An Analysis of GangNET Data, March 2012, Table 4. Gang Numbers and Node by County; http://www.ncgccd.org/pdfs/pubs/gang%20crime/2012GangReport.pdf.
c - NC Department of Justice, State Bureau of Investigation, Crime, Enforce Drug Laws, Meth Focus, Meth Lab Busts; http://www.ncdoj.gov/getdoc/b1f6f30e-df89-4679-9889-53a3f185c849/Meth-Lab-Busts.aspx.

Juvenile Crime

The following definitions will be useful in understanding the subsequent data and discussion.

Complaint: A formal allegation that a juvenile committed an offense, which will be reviewed by a counselor who decides whether to approve or not approve the complaint. If approved, it will be heard in juvenile court.
Undisciplined: Describes a juvenile between the ages of six and 16, who is unlawfully absent from school, or regularly disobedient and beyond disciplinary control of parent/guardian, or is regularly found where it is unlawful for juveniles to be, or has run away from home for more than 24 hours. It also includes 16-17 year olds who have done any of the above except being absent from school.
Delinquent: Describes a juvenile between the ages of six and not yet 16 who commits an offense that would be a crime under state or local law if committed by an adult.
Diversion: If a complaint is not approved, it may be diverted to a community resource or placed on a diversion contract or plan that lays out stipulations for the juvenile (like community service) to keep the juvenile out of court.
Non-divertible: Non-divertible offenses include offenses like: murder, rape, sexual offense, arson, first degree burglary, crime against nature, willful infliction of serious bodily harm, assault with deadly weapon, etc.
Transfer to Superior Court: A juvenile who is 13, 14 or 15 who is alleged to have committed a felony may be transferred to Superior Court and tried and sentenced as an adult. If a juvenile is over 13 and charged with first degree murder, the judge must transfer the case to Superior Court if probable cause is found.
Rate: The number per 1,000 persons that are aged 6 to 17 in the county.

Table 52 presents a summary of juvenile justice complaints and outcomes for 2010 and 2011.

- Between 2010 and 2011 the *number* of complaints of *undisciplined* youth in Pasquotank County decreased from 36 to 24 (33%), and the *rate* of *undisciplined* youth decreased from 6.07 to 4.03 (34%).
- Over the same period the *number* of complaints of *delinquent* youth in Pasquotank County decreased from 260 to 153 (41%), and the *rate* of *delinquent* youth decreased from 53.27 to 30.65 (42%).
- In both 2010 and 2011 higher numbers of Pasquotank County juveniles were sent to secure detention than the regional average.
- No Pasquotank County juveniles were sent to youth development centers in 2010; one juvenile was transferred to Superior Court in 2011.

Table 52. Juvenile Justice Complaints and Outcomes (2010 and 2011)

Location	Complaints								Outcomes					
	No. Undisciplined		No. Delinquent		Rate Undisciplined (Complaints per 1,000 Ages 6 to 17)		Rate Delinquent (Complaints per 1,000 Age 6 to 15)		No. Sent to Secure Detention		No. Sent to Youth Development Center		No. Transferred to Superior Court	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Pasquotank County	36	24	260	153	6.07	4.03	53.27	30.65	20	23	0	0	0	1
Regional Average	10	9	83	66	2.92	2.89	29.06	24.99	9	10	0	0	0	0
Scotland County	40	37	252	242	6.11	6.22	47.45	49.71	41	22	0	2	1	0
State of NC	4,285	3,603	33,299	33,556	2.94	2.34	27.55	26.08	4,297	3,558	357	307	30	28

Source: NC Department of Juvenile Justice and Delinquency Prevention, Statistics and Legislative Reports, County Databooks (Search by Year); http://www.ncdjjdp.org/statistics/databook.html.

Sexual Assault

Table 53 summarizes data from the Domestic Violence Commission of the NC Council for Women on the number of individuals who filed complaints of sexual assault from FY2004-05 through FY2010-11.

- Since the figures are counts and not rates, they are difficult to compare from one jurisdiction to another.
- The annual number of complaints varied without a clear pattern in all four jurisdictions over the period covered but appeared to have increased dramatically—by almost 120%—in Pasquotank County between FY2008-09 and FY2009-10, the same period during which there was an increase of complaints region-wide.
- Statewide, there was a 58% increase in the number of complaints between FY2008-09 and FY2009-10, and a smaller increase between FY2009-10 and FY2010-11.

Table 53. Sexual Assault Complaint Trend (FY2004-05 through FY2010-11)

Location	No. of Individuals Filing Complaints ("Clients")						
	FY2004-05	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11
Pasquotank County	77	38	73	26	72	158	121
Regional Average	77	38	39	17	58	66	51
Scotland County	28	23	7	8	25	43	115
State of NC	8,564	8,721	7,444	6,527	8,494	13,392	13,881

* Program submitted partial data.
Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); http://www.doa.state.nc.us/cfw/stats.htm.

Table 54 presents details on the types of sexual assaults reported in FY2010-11.

- The largest proportion of sexual assault complaints in Pasquotank County (43.8%) and Scotland County (80.0%) was by adult survivors of child sexual assault. The second largest proportion in Pasquotank County (21.5%) was for marital rape. In Scotland County the second highest proportion of complaints (6.1%) was for adult rape.
- Region-wide the largest proportion of sexual assault complaints (39.7%) was by adult survivors of child sexual assault, and the second highest proportion (22.6%) was for child sexual offense.
- Statewide the largest proportion of sexual assault complaints (23.7%) involved adult rape; the second largest proportion (22.2%) involved child sexual offense.

Table 54. Types of Sexual Assaults (FY2010-11)

Location	Total Assault Clients	Type of Assault													
		Adult Rape		Date Rape		Adult Survivor of Child Sexual Assault		Marital Rape		Child Sexual Offense		Incest		Other	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasquotank County	121	15	12.4	12	9.9	53	43.8	26	21.5	6	5.0	4	3.3	5	4.1
Regional Average	51	6	11.7	3	6.4	20	39.7	5	10.3	12	22.6	3	6.1	2	3.1
Scotland County	115	7	6.1	2	1.7	92	80.0	6	5.2	4	3.5	0	0.0	4	3.5
State of NC	13,881	3,289	23.7	1,328	9.6	2,393	17.2	1,162	8.4	3,086	22.2	1,216	8.8	1,407	10.1

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2010-2011 County Statistics; http://www.doa.state.nc.us/cfw/stats.htm.

Table 55 details the types of offenders involved in sexual assaults in FY2010-11.

- In Pasquotank County the most common offender in sexual assault complaints was a relative (64.5%), followed by a boy/girlfriend (17.4%).
- In Scotland County the most common offender was a relative (47.3%), followed by a boy/girlfriend (35.5%).
- Region-wide, the most common offender was a relative (51.4%), followed by an acquaintance (33.1%).
- Statewide the most common offender was a relative (36.6%), followed closely by an acquaintance (33.1%).

Table 55. Types of Offenders in Sexual Assaults (FY2010-11)

Location	Total Offenders	Type of Offender									
		Relative		Acquaintance		Boy/Girl Friend		Stranger		Unknown	
		No.	%	No.	%	No.	%	No.	%	No.	%
Pasquotank County	121	78	64.5	20	16.5	21	17.4	2	1.7	0	0.0
Regional Average	49	28	51.4	14	33.1	5	8.7	2	4.9	1	1.9
Scotland County	110	52	47.3	11	10.0	39	35.5	7	6.4	1	0.9
State of NC	13,603	4,978	36.6	4,505	33.1	1,635	12.0	928	6.8	1,557	11.4

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2010-2011 County Statistics; http://www.doa.state.nc.us/cfw/stats.htm.

Domestic Violence

Table 56 summarizes data from the Domestic Violence Commission of the NC Council for Women on the number of individuals who filed complaints of domestic violence from FY2004-05 through FY2010-11.

- Since the figures are counts and not rates, they are difficult to compare from one jurisdiction to another.
- The annual number of complaints varies without a clear pattern except for increases in all four jurisdictions between FY2008-09 and FY2009-10.

Table 56. Domestic Violence Complaint Trend (FY2004-05 through FY2010-11)

Location	No. of Individuals Filing Complaints ("Clients")						
	FY2004-05	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11
Pasquotank County	342	318	429	366	323	723	590
Regional Average	177	145	180	134	163	252	216
Scotland County	240	222	201	134	214	266	203
State of NC	50,726	48,173	47,305	41,787	51,873	66,320	61,283

* Program submitted partial data.
Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, County Statistics (years as noted); http://www.doa.state.nc.us/cfw/stats.htm.

Table 57 provides details on the services received by domestic violence complainants in FY2010-11.

- The 590 complaints of domestic violence in Pasquotank County were addressed by a total of 9,708 services.
- The largest numbers of services received by domestic violence complainants in Pasquotank County were for advocacy (3,351) followed by information (2,303) and counseling (2,019).
- The largest numbers of services received by complainants region-wide were for advocacy, information and counseling.
- The local domestic violence shelter serving Pasquotank County was full on 114 days and the shelter in Scotland County was never full.

Table 57. Services Received by Domestic Violence Complainants (FY2010-11)

Location	Total Domestic Violence Clients	Services Received									Days Local Shelter was Full
		Total	Information	Advocacy	Referral	Transport	Counseling	Hospital	Court	Other	
Pasquotank County	590	9,708	2,303	3,351	1,620	90	2,019	3	322	0	114
Regional Average	216	3,302	731	1,236	441	72	606	1	214	1	110
Scotland County	203	6,273	129	750	118	123	228	5	158	4,762	0
State of NC	61,283	476,979	107,679	105,203	69,533	27,933	68,981	1,232	48,995	47,423	7,999

Source: NC Department of Administration, Council for Women, Domestic Violence Commission, Statistics, 2010-11 County Statistics; http://www.doa.state.nc.us/cfw/stats.htm.

Albemarle Hopeline, Inc.

Albemarle Hopeline, a private, non-profit organization founded in 1981, is the only program of its kind in the Albemarle region, with outreach through four satellite offices (Chowan, Currituck, Gates and Perquimans counties), a shelter/direct service facility, and a thrift store. The agency is guided by the mission of "providing comprehensive direct and preventive services to victims of family violence, sexual assault and teen dating violence" in the counties of Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans.

Services include: 24-hour crisis line; emergency Hope House shelter; food, clothing and transportation; crisis intervention; court advocacy; individual and group counseling for adults and children; Displaced Homemaker Program; information and referral; outreach; and prevention through awareness and education to school, church and civic groups and the community-at-large. Since the opening of an enlarged 14,200 square foot Hope House facility in 2006, Hopeline has been able to consolidate services to both residential and non-residential victims, and improve coordination and effectiveness. All services are designed to meet basic safety needs of victims of domestic and sexual violence, empowering them to establish and maintain healthy, violence-free lives ([36]).

Phone: 252-338-5338
24-hour crisis line: 252-338-3011
Fax: 252-338-2952
Mailing address: PO Box 2064, Elizabeth City, NC 27906-2064
Website: www.albemarlehopeline.org.

Child Maltreatment

The responsibility for identifying and reporting cases of child abuse, neglect and exploitation falls to the child protective services program within a county's department of social services. Generally speaking, such a unit will have sufficient staff to handle intake of all reports. However, an agency's ability to investigate and monitor reported cases may vary from year to year, depending on the number of properly trained staff available to it; hence, follow-up on reports may vary independently of the number of reports. Table 58 presents child protective services data from the state's Child Welfare website for the period from FY2004-05 through FY2011-12.

- The total number of findings of child abuse, neglect or dependency in Pasquotank County fluctuated annually without a clear pattern. For the period cited, the highest number of findings was 364 in FY2007-08, and the lowest was 300 in FY2004-05. The average number of reports of child abuse, neglect or dependency per year throughout the period cited was 335.
- Over the period covered in the table the annual total number of *substantiated* findings of abuse and neglect, abuse only, and neglect only covered by those reports ranged from a low of 19 in FY2006-07 to a high of 69 in FY2004-05, and averaged approximately 38 per year.

Table 58. Reports of Child Abuse and Neglect, Pasquotank County (FY2004-05 through FY2011-12)

Category	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Total No. of Findings of Abuse, Neglect, Dependency	300	343	307	364	338	358	350	323
No. Substantiated[1] Findings of Abuse and Neglect	4	5	1	5	1	2	8	0
No. Substantiated Findings of Abuse	3	5	0	3	4	1	1	0
No. Substantiated Findings of Neglect	62	14	18	28	29	24	42	46
Services Recommended	27	194	141	130	82	36	34	40
No. Unsubstantiated Findings	163	39	81	119	148	232	241	203
Services Not Recommended	35	59	37	69	69	17	18	28

[1] A "substantiated" report of child abuse, neglect or exploitation indicates that the investigation supports a conclusion that the subject child(ren) was/were abused, neglected, or exploited.
Source: Child Welfare, Reports of Abuse and Neglect section, Reports of Abuse and Neglect Type of Finding/Decision (Not Exclusive) (Longitudinal Data); http://sasweb.unc.edu/cgi-bin/broker?_service=default&_program=cwweb.tbReport.sas&county=Alamance&label=County&format=html&entry=10&type=CHILD&fn=FRST&vtype=xfind.

Table 59 presents demographic detail from the same source as above on the cases in Pasquotank County described for FY2011-12.

- Thirty-six of the 46 substantiated neglect cases (78%) involved African American children; seven of 46 (15%) involved white children.
- For the year cited, 26 (57%) of the neglect cases involved males and 20 (43%) involved females; 34 victims were very young (age 0-5), 10 were age 6-12 and two were age 13-17.

Table 59. Demographic Detail of Child Abuse Cases, Pasquotank County (FY2011-12)

Finding	Total	White	African-American	American Indian/Alaskan	Other Races	Hispanic	Non-Hispanic	Male	Female	Ages 0-5	Ages 6-12	Ages 13-17	Missing Age Information
Neglect	46	7	36	0	3	1	45	26	20	34	10	2	0
Services Needed	5	1	4	0	0	0	5	3	2	2	2	1	0
Services Provided, No Longer Needed	1	0	0	0	1	0	1	0	1	0	0	1	0
Services Recommended	40	17	16	0	7	0	40	17	23	26	10	4	0
Unsubstantiated	203	95	73	0	35	15	188	95	108	105	65	32	1
Services Not Recommended	28	13	10	0	5	0	28	12	16	16	10	2	0

Source: Child Welfare, Reports of Abuse and Neglect section, Table of Summary Data: Type of Finding by Category (Longitudinal). http://sasweb.unc.edu/cgi-bin/broker?_service=default&_program=cwweb.icans.sas&county=North%20Carolina&label=&entry=10.

Adult Maltreatment

Adults who are elderly, frail, or mentally challenged are also subject to abuse, neglect and exploitation. County DSS Adult Protective Services units screen, investigate and evaluate reports of what may broadly be referred to as adult maltreatment. Table 60 presents state-cataloged adult protective service survey data for 2009 and 2011.

- Note that reports "screened out" do not meet the legal definition of potential maltreatment and are not investigated further.
- In Pasquotank County the proportion of reports screened in for further investigation and services was 75% in 2009 and 81% in 2011.
- Services most frequently provided to Pasquotank County adult maltreatment victims were outreach, information and referral, law enforcement, and district attorney involvement.

Table 60. NC Adult Protective Services Survey Results (2009 and 2011)

Location	2009										
	Reports Received	Reports Screened In	Reports Screened Out	Information and Referral	Outreach	Law Enforcement	DHSR or Home Specialist	District Attorney	Veterans Admin	Division of Medical Assistance	Social Security
Pasquotank County	63	47	16	4	9	2	2	1	0	0	0
Regional Average	31	16	14	4	6	1	1	1	0	0	0
Scotland County	32	21	11	8	2	0	0	0	0	0	0
State of NC	17,073	9,835	7,239	2,443	2,640	471	568	488	34	42	134

Location	2011										
	Reports Received	Reports Screened In	Reports Screened Out	Information and Referral	Outreach	Law Enforcement	DHSR or Home Specialist	District Attorney	Veterans Admin	Division of Medical Assistance	Social Security
Pasquotank County	58	47	11	2	6	4	2	4	0	0	0
Regional Average	35	21	14	3	7	1	1	1	0	0	0
Scotland County	46	39	7	5	3	3	2	0	0	0	0
State of NC	19,635	10,929	8,706	2,665	2,736	725	475	651	33	30	152

Source: NC DHHS. Division of Aging and Adult Services. Adult Protective Services. APS Survey Data, 2009 and 2011; http://www.ncdhhs.gov/aging/adultsvcs/afs_aps.htm

CHAPTER THREE: HEALTH RESOURCES

Access to and utilization of healthcare is affected by a range of variables including the availability of medical insurance coverage, availability of medical professionals, transportation, cultural expectations and other factors.

MEDICAL INSURANCE

Medically Indigent Population

In most communities, citizens' utilization of health care services is related to their ability to pay for those services, either directly or through private or government health insurance plans/programs. People without these supports are called "medically indigent", and theirs is often the segment of the population least likely to seek and/or to be able to access necessary health care.

Table 61 presents data on the proportion of the population (by age group) without health insurance of any kind. The health insurance system in the US is built largely upon employer-based insurance coverage, so an increase in the number of unemployed people usually leads to an increase in the number of uninsured.

- Over the period cited in the table, the percent of the Pasquotank County population overall (age 0-64) without health insurance decreased in each biennium shown in the table.
- In all jurisdictions the younger age group (0-18) had a lower percent without health insurance than the older age group (19-64).
- The percent of uninsured in the younger age group in Pasquotank County decreased from 14.3% in 2006-2007 to 8.2% in 2010-2011, a 43% improvement.

Table 61. Percent of Population without Health Insurance, by Age Group (2006-07, 2008-09, and 2010-11)

Location	2006-2007			2008-2009			2010-2011		
	0-18	19-64	0-64	0-18	19-64	0-64	0-18	19-64	0-64
Pasquotank County	14.3	26.1	22.4	10.7	25.5	21.1	8.2	21.1	17.4
Regional Average	11.6	24.4	20.4	10.2	24.2	20.1	7.8	21.4	17.6
Scotland County	11.9	24.5	20.4	11.4	26.0	21.5	8.5	21.7	17.7
State of NC	11.3	19.5	19.5	11.5	23.2	19.7	9.4[1]	23.0[1]	18.9[1]

Source: North Carolina Institute of Medicine, NC Health Data, Uninsured Snapshots, Characteristics of Uninsured North Carolinians; http://www.nciom.org/nc-health-data/uninsured-snapshots/.
[1] Source: North Carolina Institute of Medicine, NC Health Data, Uninsured Snapshots, Characteristics of Uninsured North Carolinians 2020-2011, http://www.nciom.org/nc-health-data/uninsured-snapshots/.

North Carolina Health Choice

In 1997, the Federal government created the *State Children's Health Insurance Program* (SCHI)—later known more simply as the *Children's Health Insurance Program* (CHIP)—that provides matching funds to states for health insurance for families with children. The program covers uninsured children in low-income families who earn too much to qualify for Medicaid (37).

States are given flexibility in designing their CHIP eligibility requirements and policies within broad Federal guidelines. The NC CHIP program is called NC Health Choice for Children (NCHC). This plan, which took effect in October 1998, includes the same benefits as the State Health Plan, plus vision, hearing and dental benefits (following the same guidelines as Medicaid). Children enrolled in NCHC are eligible for benefits including sick visits, check-ups, hospital care, counseling, prescriptions, dental care, eye exams and glasses, hearing exams, hearing aids, and more. In NC, the maximum income limit for participation in the NCHC program is 200% of the Federal Poverty Guideline (38).

Table 62 presents enrollment figures for NCHC for FY2008-2010. It should be noted that enrollment is directly related to the funding available, which may change at either the Federal or state level.

- In Pasquotank County the *number* of children eligible decreased 12% overall between FY2008 and FY2010.
- In Pasquotank County the *percent* of eligible children actually enrolled fell slightly in FY2009. Region-wide and statewide, the percent of eligible children enrolled in the program increased every year over the period cited.

Table 62. NC Health Choice Enrollment (FY2008 through FY2010)

Location	FY2008			FY2009			FY2010		
	# Children Eligible	# Eligibles Enrolled	% Eligibles Enrolled	# Children Eligible	# Eligibles Enrolled	% Eligibles Enrolled	# Children Eligible	# Eligibles Enrolled	% Eligibles Enrolled
Pasquotank County	671	586	87.3	647	550	85.0	593	505	85.2
Regional Average	283	207	63.7	284	218	70.2	282	216	72.9
Scotland County	618	490	79.3	621	562	90.5	649	553	85.2
State of NC	131,446	87,234	66.4	140,141	103,624	73.9	143,022	122,536	85.7

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County-Specific Snapshots for NC Medicaid Services, 2006-2010; http://www.ncdhhs.gov/dma/countyreports/index.htm.

Medicaid

Medicaid is a health insurance program for low-income individuals and families who cannot afford health care costs. It serves low-income parents, children, seniors, and people with disabilities. Both coverage and eligibility requirements are different for people with different kinds of needs. Chief among these requirements is low income, which depending on service can range from 51% to 200% of the Federal Poverty Guideline.

Table 63 summarizes data on Medicaid eligibility and expenditures for the period from FY2008 through FY2010.

- The number of Pasquotank County residents eligible for Medicaid increased from one year to the next throughout the period cited, but the percent eligible varied little.
- The expenditure/cost per adult enrollee in Pasquotank County decreased annually from FY2008 to FY2010.
- Scotland County had the highest proportion of Medicaid-eligible residents throughout the period cited, averaging 29.3%. The average in Pasquotank County was 18.3%; region-wide the comparable average was 17.6% and statewide it was 16.0%.

Table 63. Medicaid Eligibility and Expenditures (FY2008 through FY2010)

Location	FY2008			FY2009			FY2010		
	No. Eligible	% Eligible	Average Cost per Adult Enrollee	No. Eligible	% Eligible	Average Cost per Adult Enrollee	No. Eligible	% Eligible	Average Cost per Adult Enrollee
Pasquotank County	7,171	18.0	$6,438	7,430	18.0	$6,376	7,617	19.0	$6,039
Regional Average	3,286	17.1	$6,597	3,441	17.7	$6,673	3,543	17.9	$6,389
Scotland County	10,661	29.0	$6,665	10,837	29.0	$6,933	10,855	30.0	$7,117
State of NC	1,397,732	15.0	$7,244	1,500,204	16.0	$7,389	1,577,121	17.0	$7,256

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County-Specific Snapshots for NC Medicaid Services, 2006-2010 (geographies as noted); http://www.ncdhhs.gov/dma/countyreports/index.htm.

The county department of social services is responsible for facilitating its clients' access to the range of Medicaid services for which they may qualify. Table 64 presents local data on Adult Medicaid services facilitated by PCDSS in the first 10 months of FY2012. Table 65 presents similar figures for Family and Children's Medicaid over the same period.

- The average number of Adult Medicaid applications taken monthly over the period cited was 79. The average monthly caseload was 2,363.

Table 64. Adult Medicaid Services Provided by Pasquotank County Department of Social Services (January, 2012 through October, 2012)

Program	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Applications Taken	100	85	108	52	76	79	78	69	63	83
Applications Processed	106	90	97	80	85	77	88	75	58	89
Reviews	206	209	209	106	117	141	110	124	129	115
Terminations/Changes	285	180	159	162	139	249	158	166	144	187
SSI Cases	1,122	1,125	1,136	1,139	1,143	1,139	1,143	1,143	1,135	1,138
Total Caseload	2,328	2,342	2,350	2,360	2,379	2,378	2,389	2,372	2,362	2,370

Source: Melissa Stokely, Pasquotank County Department of Social Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, December 3, 2012.

- The average number of Family and Children's Medicaid applications taken monthly over the period cited was 240 . The average monthly caseload was 4,114.

Table 65. Family and Children's Medicaid Services Provided by Pasquotank County Department of Social Services (January, 2012 through October, 2012)

Program	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Applications Taken	253	205	237	206	224	244	271	258	231	271
Applications Processed	271	248	248	193	206	250	241	261	278	186
Reviews	311	289	341	253	275	309	334	341	240	310
Terminations/Changes	592	556	470	436	532	554	562	593	474	594
Total Caseload	4,071	4,099	4,110	4,123	4,144	4,124	4,105	4,127	4,101	4,133

Source: Melissa Stokely, Pasquotank County Department of Social Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, December 3, 2012.

Health Check Early Periodic Screening, Diagnosis and Treatment

Federal law requires that Medicaid-eligible children under the age of 21 receive any medically necessary health care service covered by the federal Medicaid law, even if the service is not normally included in the NC State Medicaid Plan. This requirement is called Early Periodic Screening, Diagnosis and Treatment (EPSDT). In NC, Health Check EPSDT covers complete medical and dental check-ups, provides vision and hearing screenings, and referrals for treatment (39).

Table 66 presents a four-year summary of the participation of eligible children in the NC HealthCheck program.

- The participation ratio for Pasquotank County children decreased 30% between FY2007-08 and FY2010-11 even as the number of eligible Pasquotank County children due initial or periodic Health Check EPSDT services increased 53% over the same period. Similar phenomena were observed in the other three jurisdictions as well.
- The Health Check participation ratio in Pasquotank County was higher than the comparable regional ratio during each fiscal year cited.

Table 66. Participation in Health Check (EPSDT)
(FY2007-08 through FY2010-11)

Location	FY2007-08			FY2008-09			FY2009-10			FY2010-11		
	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio	No. Eligible	No. Eligibles Due Initial or Periodic Service	Participation Ratio
Pasquotank County	4,907	2,759	77.8	5,010	2,805	79.9	5,018	4,314	56.2	5,110	4,229	54.4
Regional Average	2,181	1,175	72.6	2,235	1,211	71.8	2,282	1,955	47.2	2,296	1,896	46.1
Scotland County	7,170	3,759	71.7	7,246	3,769	73.9	7,224	6,352	44.5	7,221	6,272	49.7
State of NC	n/a	563,421	77.3	n/a	594,043	80.0	1,185,510	963,619	53.8	1,146,716	961,381	54.7

Note: the participation ratio is calculated by dividing the number of eligibles receiving at least one initial screening service by the number of eligibles who should receive at least 1 initial or period screenings (not shown in the table).
Source: NC Division of Medical Assistance, Statistics and Reports, Health Check Participation Data; http://www.ncdhhs.gov/dma/healthcheck/participationdata.htm.

Medicaid Managed Care: Community Care of North Carolina/Carolina ACCESS

The goal of Medicaid managed care is to create community health networks to achieve long-term quality, cost, access, and utilization objectives. NC's approach to Medicaid managed care is to create medical homes for eligible Medicaid recipients by enrolling them into Community Care of North Carolina/Carolina ACCESS (CCNC/CA). Today CCNC/CA combines Carolina ACCCESS and ACCESS II/III, which are primary care case management health plans (40).

Carolina ACCESS

Carolina ACCESS, implemented in 1991, is NC's Primary Care Case Management (PCCM) Program for Medicaid recipients. It serves as the foundation managed care program for Medicaid recipients and brings a system of coordinated care to the Medicaid program by linking each eligible recipient with a primary care provider (PCP) who has agreed to provide or authorize healthcare services for each enrollee. Primary care providers bill fee-for-service and are reimbursed based on the Medicaid fee schedule; they also receive a small monetary incentive per member per month for coordinating the care of program participants enrolled with their practice. By improving access to primary care and encouraging a stable doctor-patient relationship, the program helps to promote continuity of care, while reducing inappropriate health service utilization and controlling costs. The program expanded statewide in 1998.

Carolina ACCESS created the infrastructure for ACCESS II/III, an enhanced community-based primary care case management health plan.

Carolina ACCESS II/III

ACCESS II and III are enhanced primary care programs initiated in 1998 to work with local providers and networks to manage the Medicaid population with processes that impact both the quality and cost of healthcare. ACCESS II/III includes local networks comprised of community providers such as primary care practices, hospitals, health departments, departments of social services, and others who have agreed to work together in a public/private partnership to operate as a Carolina ACCESS PCP and provide the care management systems and supports that are needed to manage enrollee care. In addition to a primary care provider, ACCESS II and III enrollees have care managers who assist in developing, implementing, and evaluating enhanced managed care strategies for them. Because health care is planned and provided on the community level, larger community health issues can be addressed. Providers in ACCESS II and III receive a small monetary incentive per member per month; the PCPs are paid a small per member per month care management fee. A majority of Medicaid recipients enrolled in managed care are linked with a CCNC network. There are fourteen networks operating statewide; Pasquotank County is a member of the Community Care Plan of Eastern Carolina, which also includes 26 other counties in the eastern part of the state.

Table 67 summarizes CCNC/CA enrollment data for the period from 2007-2010.

- The percent of Medicaid eligible persons in Pasquotank County enrolled in CCNC/CA decreased in 2010, to 61% from a three-year average of approximately 66%; this decrease in enrollment occurred as the number of county residents enrolled in Medicaid *increased* by 9%.
- Statewide, the percent of Medicaid eligible persons enrolled in CCNC/CA averaged approximately 65% over the four-year period cited; region-wide the average was 61%.

Table 67. Community Care of NC/Carolina ACCESS Enrollment (2007-2010)

Location	2007		2008		2009		2010	
	No. Enrolled in Medicaid	% Medicaid Eligibles Enrolled	No. Enrolled in Medicaid	% Medicaid Eligibles Enrolled	No. Enrolled in Medicaid	% Medicaid Eligibles Enrolled	No. Enrolled in Medicaid	% Medicaid Eligibles Enrolled
Pasquotank County	6,994	66	7,171	65	7,430	68	7,617	61
Regional Average	3,210	61	3,286	59	3,441	63	3,543	61
Scotland County	10,533	64	10,661	65	10,837	68	10,855	74
State of NC	1,330,485	62	1,397,732	64	1,500,204	67	1,577,121	66

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County-Specific Snapshots for NC Medicaid Services, 2006-2010 (geographies as noted); http://www.ncdhhs.gov/dma/countyreports/index.htm.

Medicare

Medicare is the US government's health insurance program for senior citizens (people 65 years of age or older), certain younger people with specific disabilities, and people with end-stage renal disease. Medicare is an entitlement program and is not based on financial need. Medicare benefits are available to all Americans or their spouses who have paid Social Security taxes through their working years.

Some persons who receive Medicare also qualify for Medicaid; these persons are referred to as "dually enrolled", and tend to be elderly and poor. Table 68 summarizes dual Medicare/Medicaid enrollment data for the period from 2007-2010.

- Pasquotank County had the second-highest percentage of dual Medicare/Medicaid enrollees in each year cited, behind the regional average.

Table 68. Medicare/Medicaid Dual Enrollment (2007-2010)

Location	Percent of Eligibles Dually Enrolled			
	2007	2008	2009	2010
Pasquotank County	17.5	17.0	16.7	16.8
Regional Average	19.4	19.0	18.0	17.4
Scotland County	15.6	15.5	14.9	14.9
State of NC	16.7	16.1	15.0	14.5

Source: NC Division of Medical Assistance, Statistics and Reports, Medicaid Data, County Specific Snapshots for NC Medicaid Services; http://www.ncdhhs.gov/dma/countyreports/index.htm.

HEALTH CARE PROVIDERS

Practitioners

One way to judge the supply of health professionals in a jurisdiction is to calculate the ratio of the number of health care providers to the number of persons in the population of that jurisdiction. In NC, there is data on the ratio of active health professionals per 10,000 population calculated at the county level. Table 69 presents those data (which for simplicity's sake will be referred to simply as the "ratio") for Pasquotank County, Scotland County, the Albemarle Region, the state of NC and the US for five key categories of health care professionals: physicians, primary care physicians, registered nurses, dentists and pharmacists. The period covered is 2009-2011.

- The regional average ratios were lowest among the comparators for every category of professional, for every time period shown in the table.
- The Pasquotank County ratios for physicians and primary care physicians were higher than the comparable state ratio in 2010 and 2011, and higher than the comparable US ratio in every year except 2009.
- The Pasquotank County ratio for dentists was higher than the regional average, but below state and national averages, in every period cited.
- The ratio for RNs in Pasquotank County significantly exceeded comparable ratios for all the other jurisdictions in every year cited.
- The ratio for pharmacists in Pasquotank County was the second- or third-highest among the comparators in every period cited.

Table 69. Active Health Professionals per 10,000 Population (2009-2011)

Location	2009					2010					2011				
	MDs	Primary Care MDs	DDSs	RNs	Pharms	MDs	Primary Care MDs	DDSs	RNs	Pharms	MDs	Primary Care MDs	DDS	RNs	Pharms
Pasquotank County	22.1	8.2	2.9	101.9	8.2	26.6	9.8	3.2	112.1	8.9	25.7	8.4	2.7	108.6	8.9
Regional Average	8.0	4.5	1.7	52.0	3.9	8.6	4.6	1.6	49.7	4.2	8.6	3.9	1.7	49.4	4.0
Scotland County	17.6	9.2	2.7	91.0	7.6	17.2	8.6	2.5	92.0	7.5	18.1	8.1	2.2	92.7	8.1
State of NC	21.2	9.2	4.4	96.9	9.3	21.7	9.4	4.4	97.3	9.2	22.1	7.8	4.4	98.6	9.5
United States	23.4[2]	8.5[2]	5.3[3]	92.5[3]	8.7[3]	22.7[2]	8.2[2]	5.7[3]	92.0[3]	8.3[3]	22.7[2]	8.2[2]	5.7[3]	92.0[3]	8.3[3]

Abbreviations used: MDs (Physicians), RNs (Registered Nurses), DDSs (Dentists), Pharms (Pharmacists)
[1] Primary Care Physicians are those who report their primary specialty as family practice, general practice, internal medicine, pediatrics, or obstetrics/gynecology
[2] US ratio from US Census Bureau estimates. Comparison data is for date two years previous.
[3] US ratio from Bureau of Labor Statistics. Comparison data matches.
Source for NC Data: Cecil G. Sheps Center for Health Services Research, North Carolina Health Professions Data System, North Carolina Health Professions Data Books, Table 14 (2008, 2009, 2010, 2011); http://www.shepscenter.unc.edu/hp/publications.htm.

Sometimes accessing dental care may be a tremendous problem for Medicaid enrollees. Table 70 lists dental practices in the Albemarle Region (i.e., northeastern NC or southeastern VA) that accept Medicaid and/or NC Health Choice clients. Several of these practices were in Pasquotank County, in Elizabeth City. Note that this list was correct at a past point in time but should not necessarily be considered up-to-date at the present time.

Table 70. Dentists in the Albemarle Region Accepting Medicaid/Health Choice Clients (Fall, 2012)

Practice Name/Provider Name	Location	Clients Accepted	Insurance Accepted
Albemarle Regional Health Services Dental Clinic	Camden & Edenton, NC	No information	Medicaid/HC
Attkisson, Wayne P.	Windsor, NC	No information	Medicaid/HC
Bald, Francis A. (Oral Surgery)	Elizabeth City, NC	No information	Medicaid/HC
Bernstein, James Dental Center	Greenville, NC	Children ages 5 and up; adults	Medicaid; sliding fee
Bradley, Jerry	Edenton, NC	No information	Medicaid/HC
Bullock, Steve	Virginia Beach, VA	Children ages up to 13	Medicaid
Burton, Kevin	Greenville, NC	Children and adults	Medicaid
Dandar, Regis A.	Elizabeth City, NC	Children ages 3 and up; adults	Medicaid
Epps, John'e J. (Cosmetic Dentistry)	Ahoskie, Aulander, Elizabeth City, NC	No information	HC
Gilliam, Robert	Elizabeth City, NC	No information	Medicaid/HC
Jones, Clifford	Elizabeth City, NC	Children ages 3 and up; adults	Medicaid/HC
Kaplin, Marvin (Orthodontics)	Chesapeake, VA	Children ages 8-17	Medicaid
Martin, J., IV	Portsmouth, VA	Children ages 1-18	Medicaid
Martin-Tyrrell-Washington District Dental Unit	Plymouth, NC	Children ages 1-20	Medicaid
Morgan, Partick H., Jr.	Currituck, NC	No information	HC
Smile Starters - Medicaid Dental Center	Raleigh, NC	Children ages 1-20	Medicaid
Smith, Jacqueline	Edenton, NC	No information	Medicaid/HC
Solomon, Albert P.	Chesapeake, VA	Children ages 3 and up; adults	Medicaid
Sundin, Allan C.	Virginia Beach, VA	Children ages up to 13	Medicaid
Wuertz, Karen	Elizabeth City, NC	No information	HC

Sources:
Division of Medical Assistance, Medicaid, Find a Doctor, NC Medicaid and NC Health Choice Dental Provider Lists; http://www.ncdhhs.gov/dma/dental/dentalprov.htm.
Lara Snyder, Public Health Education Specialist, Dare County Department of Public Health. Personal communication to Sheila Pfaender, Public Health Consultant, December 18, 2012.
Melissa Stokely, Perquimans County Department of Social Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, November 30, 2012.

Table 71 lists the number of active health professionals in Pasquotank County and the ARHS region, by specialty, for 2011:

- The number and variety of health professionals in Pasquotank County reflect its status as home to Elizabeth City, the largest municipality in the region and location of a large medical center.
- There were no general practitioners in Pasquotank County at the time of the count.
- Medical specialties present in fewest numbers in Pasquotank County included podiatrists (1), psychological assistants (2), optometrists (4), chiropractors (4) and certified nurse midwives (4).
- At the regional level there were no general practitioners and only one podiatrist (the practitioner in Elizabeth City) listed in 2011.

Table 71. Number of Active Health Professionals, by Specialty (2011)

Category of Professionals	Pasquotank County	Regional Total
Physicians		
Primary Care Physicians	34	64
Family Practice	7	23
General Practice	0	0
Internal Medicine	12	21
Obstetrics/Gynecology	8	11
Pediatrics	7	9
Other Specialities	70	96
Dentists and Dental Hygienists		
Dentists	11	26
Dental Hygienists	11	29
Nurses		
Registered Nurses	439	823
Nurse Practitioners	16	28
Certified Nurse Midwives	4	6
Licensed Practical Nurses	139	284
Other Health Professionals		
Chiropractors	4	10
Occupational Therapists	11	22
Occupational Therapy Assistants	6	15
Optometrists	4	6
Pharmacists	36	67
Physical Therapists	26	36
Physical Therapy Assistants	22	41
Physician Assistants	19	33
Podiatrists	1	1
Practicing Psychologists	10	12
Psychological Assistants	2	9
Respiratory Therapists	24	32

[1] Numbers reported include those active within the profession and those newly licensed in 2009 with unknown activity status; inactives are excluded.
Source: Cecil G. Sheps Center for Health Services Research, North Carolina Health Professions Data System. Publications. 2011 North Carolina Health Professions Databook; http://www.shepscenter.unc.edu/hp/publications/2011_HPDS_DataBook.pdf.

Hospitals

Table 72, which lists the number of general hospital beds in the four jurisdictions being included in this report, reflects the fact that there is only one hospital in Pasquotank County: Albemarle Hospital.

Table 72. Number of General Hospital Beds[1]
(2004-2010)

Location	2004	2005	2006	2007	2008	2009	2010
Pasquotank County	182	182	182	182	182	182	182
Regional Average	37	34	34	34	34	34	34
Scotland County	97	97	97	97	97	97	97
State of NC	20,590	20,338	20,329	20,322	20,443	20,647	20,699

[1] Defined as "general acute care beds" in hospitals; that is, beds which are designated for short-stay use. Excluded are beds in service for dedicated clinical research, substance abuse, psychiatry, rehabilitation, hospice, and long-term care. Also excluded are beds in all federal hospitals and state hospitals.
Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 524); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Albemarle Health – Albemarle Hospital

Albemarle Hospital, located in Elizabeth City, defines its service area as Camden, Chowan, Currituck, Dare, Gates, Pasquotank, and Perquimans counties. Albemarle Hospital's medical staff includes more than 100 physicians representing nearly 30 specialties.

The hospital offers the region state-of-the-art healthcare usually not seen in similarly sized community hospitals, including: vascular surgery; small incision surgery; cardiac care including diagnostic catheterizations and pacemaker implantations; complete diagnostic imaging services including nuclear medicine, MRI, breast MRI, Mobile PET services, CT scans utilizing a 64-slice high definition CT scanner with cardiac imaging (that allows Albemarle Hospital to perform less invasive coronary CT procedures, and specialized neurological studies), and a PACS digital imaging system; multimodality cancer treatment; comprehensive rehabilitation services, including physical, occupational, and speech therapy as well as incontinence treatment and wound care; Greenlight PVP laser technology, used to treat prostate conditions; digital mammography, stereotactic breast biopsy and breast specific gamma imaging for diagnosing breast cancer; and quality emergency services that include a dedicated minor care area.

Albemarle Health also includes a number of other health facilities throughout the region. Those located in Pasquotank County include:

Regional Oncology Center - a state of the art cancer treatment facility located on the campus of Albemarle Hospital that provides patients with many types of cancer treatment, including CT simulation and multi-leaf intensity-modulated radiation therapy (IMRT), which delivers precise doses of high energy radiation to tumors.

Albemarle Health Sleep Center – located in Elizabeth City, this facility provides comprehensive diagnosis of sleep disorders including sleep apnea, insomnia, and restless legs syndrome (RLS).

Community Care Clinic – sponsored by the Albemarle Hospital Foundation, this clinic in Elizabeth City provides primary care and prescription services to the uninsured of Camden, Currituck, and Pasquotank counties.

Albemarle Health also established and supports ***Gateway Community Health Centers***. These Federally Qualified Health Centers in Tyner (in partnership with Chowan Hospital) and Gatesville see patients of all ages and charge on a sliding scale based on income. Gateway also includes an Adolescent Care Center at Gates County High School which strives to meet the health needs of students and staff. In addition, a Migrant and Seasonal Farm Worker Program provides assistance and health programming focused on the local farm worker and Hispanic communities, including medical field clinics and screenings, assistance in accessing health resources, case management, interpretation services, advocacy, health education and a tutoring program for grades K-5.

More than 25,000 residents within the system's service area are indigent, uninsured, and underinsured. Consequently, in fiscal year 2012, Albemarle Health wrote off almost $8 million in bad debt, provided almost $7 million in unreimbursed Medicare services, and provided the community with almost $7 million worth of charity care, unreimbursed Medicaid services and community benefit programs/services.

In addition to its healthcare impact, Albemarle Health is a leading financial resource to the region. The system employs more than 1,000 people regionally, with more than $54 million in annual payroll and employee benefits (41).

Other Hospitals

Table 73 lists the other seven hospitals in northeastern NC that may be accessed by Pasquotank County residents. Of these, only Vidant Medical Center in Greenville offers a Trauma Center (rated for Level I care).

Residents of Pasquotank County also may seek medical services in southeastern VA, primarily in the area referred to as the *Tidewater Region*. Table 74 lists hospitals in the cities in this region.

Table 73. Licensed Hospitals in Northeastern NC (February, 2013)

Facility Name	Location	No. Beds	Operating Rooms
Bertie County			
Vidant Bertie Hospital	Windsor	General - 6	Shared inpatient/ambulatory surgery - 2
Chowan County			
Vidant Chowan Hospital	Edenton	General - 49	Shared inpatient/ambulatory surgery - 3
		Nursing Home - 40	Endoscopy - 1
Dare County			
The Outer Banks Hospital, Inc.	Nags Head	General - 21	C-section - 1
			Shared inpatient/ambulatory surgery - 2
			Endoscopy - 2
Hertford County			
Vidant Roanoke-Chowan Hospital	Ahoskie	General - 186	C-section - 1
		Psychiatric - 28	Shared inpatient/ambulatory surgery - 3
			Endoscopy -1
Martin County			
Martin General Hospital	Williamston	General - 49	
Pitt County			
Vidant Medical Center	Greenville	General - 748	C-section - 4
		Rehabilitation - 75	Shared inpatient/ambulatory surgery - 26
		Psychiatric - 52	Endoscopy - 2
			Other inpatient - 3
Washington County			
Washington County Hospital	Plymouth	General - 49	Shared inpatient/ambulatory surgery - 2

Source: NC Department of Health and Human Services, Division of Health Service Regulation. Hospitals Licensed by the State of North Carolina; http://www.ncdhhs.gov/dhsr/reports.htm .

Table 74. Hospitals in Southeastern Virginia (February, 2013)

Hospital	Location
Chesapeake General Hospital	Chesapeake
Hampton VA Medical Center	Hampton
Riverside Behavioral Health Center	Hampton
Sentara Careplex Hospital	Hampton
Mary Immaculate Hospital	Newport News
Riverside Memorial Medical Center	Newport News
Riverside Rehabilitation Institute	Newport News
Children's Hospital of the Kings Daughters	Norfolk
DePaul Medical Center	Norfolk
Lake Taylor Hospital	Norfolk
Sentara Heart Hospital	Norfolk
Sentara Leigh Hospital	Norfolk
Sentara Norfolk General Hospital	Norfolk
Tidewater Psychiatric Institute	Norfolk
Maryview Medical Center	Portsmouth
Naval Medical Center	Portsmouth
Sentara Obici Hospital	Suffolk
Sentara Bayside Hospital	Virginia Beach
Sentara Princess Anne Hospital	Virginia Beach
Sentara Virginia Beach General Hospital	Virginia Beach
Virginia Beach Psychiatric Center	Virginia Beach

Source: The Agape Center, Virginia Hospitals; http://www.theagapecenter.com/Hospitals/Virginia.htm.

Utilization of Hospital Emergency Department Services

The emergency departments (EDs) of hospitals have become providers of convenience, urgency, or last resort for many healthcare consumers and an examination of ED utilization patterns can reveal much about the healthcare resource status of a community.

Four hospitals partnering in the development of this CHA—Vidant Bertie Hospital (VBER), Vidant Chowan Hospital (VCHO), The Outer Banks Hospital (TOBH) and Albemarle Hospital (AH)—have made available extensive utilization data, some of which will be examined in conjunction with health statistics in a later section of this report. Although not a partner in the CHA, Vidant Roanoke-Chowan Hospital (VROA) also provided service utilization data. Presented here are demographic summaries of the population of Pasquotank County residents who were admitted to the emergency departments of the four *nearest* hospitals (Vidant Bertie, Vidant Chowan, Vidant Roanoke Chowan and Albemarle Hospitals) in recent years.

Emergency Department Admission Demographics

While the majority of Pasquotank County residents who need hospital services visit Albemarle Hospital, other hospitals in the region also reported admissions of Pasquotank County residents. Table 75 summarizes the total of ED visits by residents at each of the four nearest hospitals.

Table 75. Emergency Department Admissions, Pasquotank County Residents (FY2010-FY2012)

Hospital	Number of ED Visits		
	2010	2011	2012
Vidant Bertie Hospital	28	23	22
Vidant Chowan Hospital	236	204	255
Vidant Roanoke-Chowan Hospital	22	34	25
Albemarle Hospital	18,521	23,368	26,051
Total No. ED Visits by Pasquotank County Residents	18,807	23,629	26,353

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital, and Albemarle Health.

Residence (Table 76)

- Since an annual average of only 1.2% of the total visits by Pasquotank County residents to area EDs involved Vidant Bertie, Vidant Chowan and Vidant Roanoke Chowan Hospitals, the data below refers instead *only* to the ED of Albemarle Hospital.
- Over the three-year period cited, 66.6% (two-thirds) of all Emergency Department admissions of ARHS Region residents at Albemarle Hospital were residents of Pasquotank County.

Table 76. Percent ED Visits by Pasquotank County Residents, Albemarle Hospital (FY2010-FY2012)

Location	Percent of ED Visits		
	2010	2011	2012
Total Pasquotank County Patients	66.3	67.3	66.3
Total No. ED Visits by ARHS Region Residents	27,939	34,737	39,285

Source: Albemarle Health.

Age (Table 77)

- The largest proportion of Pasquotank County residents who were admitted to the Albemarle Hospital ED in each year cited were adults between the ages of 18 and 64. The pediatric population (age 0-17) composed the second largest proportion.

Table 77. Percent ED Visits by Patient Age, Pasquotank County Residents, Albemarle Hospital (FY2010-FY2012)

Age Group	Percent of ED Visits		
	2010	2011	2012
Adult	45.2	45.8	44.3
Pediatric	13.9	14.6	14.9
Senior	7.2	6.9	7.1
Total Pasquotank County Patients	66.3	67.3	66.3
Total No. ED Visits by ARHS Region Residents	27,939	34,737	39,285

Adult = age 18-64; Pediatric = age 0-17; Senior = age 65 and older
Source: Albemarle Health.

Race (Table 78)

- Blacks composed the largest proportion of Pasquotank County residents admitted to the ED at Albemarle Hospital. Blacks from Pasquotank County composed an average of 34.9% of all Albemarle Hospital ED admissions of ARHS region residents over the three-year period cited.
- Whites composed the second-largest proportion of Pasquotank County residents admitted to the Albemarle Hospital ED. Whites from Pasquotank County composed an average of 29.8% of all annual admissions of ARHS region residents to the Albemarle Hospital ED.

Table 78. Percent ED Visits by Patient Race, Pasquotank County Residents, Albemarle Hospital (FY2010-FY2012)

Race/Ethnicity	Percent of ED Visits		
	2010	2011	2012
Asian	0.2	0.1	0.2
Black	34.5	35.5	34.7
Hispanic	1.6	1.3	1.1
Indian (Native or Alaskan)	<0.1	<0.1	<0.1
Other	0.3	0.3	0.3
Unknown	0.1	0.1	0.1
White	29.5	29.9	29.9
Total Pasquotank County Patients	66.3	67.3	66.3
Total No. ED Visits by ARHS Region Residents	27,939	34,737	39,285

Source: Albemarle Health.

Payer (Table 79)

- Medicaid was the predominant primary payer among Pasquotank County residents who were admitted to the Albemarle Hospital ED over the period cited, covering an average of 19.1% of all Albemarle Hospital ED visits by ARHS region residents annually.

- Self-pay was the second-most frequent primary payer among Pasquotank County admissions to the Albemarle Hospital ED, covering an average of 16.4% of all ED visits by ARHS region residents there annually.
- Commercial/Managed Care/Other insurance was the third-most frequent payer for Albemarle Hospital ED visits by Pasquotank County residents, covering an average of 14.4% of all ED visits by ARHS region residents there annually.

Table 79. Percent ED Visits by Payer Group, Pasquotank County Residents, Albemarle Hospital (FY2010-FY2012)

Payer Group	Percent of ED Visits		
	2010	2011	2012
CHAMPUS/Military/VA	5.1	5.0	4.9
Commercial/Managed Care/Other	15.7	14.6	13.0
Medicaid	17.7	19.4	20.3
Medicare	11.1	11.3	11.0
Self-pay	16.1	16.5	16.7
Workman's Compensation	0.6	0.5	0.4
Total Pasquotank County Patients	66.3	67.3	66.3
Total No. ED Visits by ARHS Region Residents	27,939	34,737	39,285

Source: Albemarle Health.

Diagnosis-related emergency department data and inpatient hospitalization data is presented in the Health Statistics section of this report as appropriate.

Emergency Medical Services in Pasquotank County

Emergency medical services in Pasquotank County are provided by Pasquotank-Camden Emergency Medical Service, a paramedic-level EMS organization serving both Pasquotank and Camden counties. Pasquotank-Camden EMS was founded in 1967. It is funded through Pasquotank County by fees charged to users, and by a contribution from Camden County and Albemarle Hospital. Pasquotank-Camden EMS is credentialed by the NC Office of Emergency Medical Services and employs Paramedics, EMT-Intermediates, and Emergency Medical Technicians.

Pasquotank-Camden EMS serves an area of 468 square miles with a population of over 50,000 people; it operates 24 hours a day, 7 days a week. Pasquotank County Rescue Squad, a volunteer service, supports the EMS System by providing supplemental coverage on an as scheduled basis.

Pasquotank-Camden EMS provides daily staffing for three ambulances 24 hours a day with an additional 10 am to 10 pm peak-demand crew to staff ambulances to answer 9-1-1 dispatched calls, provide transports, and cover standby requests and public events. A non-emergency ambulance crew is available from 8 am to 5 pm, Monday through Friday. Each primary advanced life support ambulance is staffed by two EMT's, one of which must have the minimum certification level of EMT-Paramedic. Each of these 'teams' provides continuous, quality pre-hospital emergency care to the residents of the two counties.

Over the past several years, Pasquotank-Camden EMS has moved ambulances to outlying substations. Currently the following EMS Station and Substations provide EMS coverage to the residents of Pasquotank and Camden Counties:

- EMS Station 50 - Main EMS Station and Administrative offices, Located next to Albemarle Hospital (24 hr.)
- EMS Station 4 - Located in the Nixonton Volunteer Fire Department (24 hr.)
- EMS Station 12 - Locate in the Camden Volunteer Fire Department (10am - 10pm)

Pasquotank-Camden EMS utilizes first responders for coverage in the outlying areas to decrease response times. The service works in coordination with other various county and city agencies, fire, sheriff and police departments. Pasquotank-Camden EMS is served by two air medical helicopters: Nightingale Air Ambulance in Norfolk, VA, and EastCare Air Ambulance in Greenville, NC. It receives support as requested from the United States Coast Guard Air Station in Elizabeth City (42).

Table 80 summarizes Pasquotank-Camden EMS Ambulance Calls for FY2011 and FY2012.

Table 80. Pasquotank-Camden EMS Ambulance Calls Summary (FY2011 and FY2012)

Total Responses	FY2011	FY2012
Location		
Camden County	591	620
Blackwater	28	12
Elizabeth City	5,458	5,486
Pasquotank County	1,318	1,877
Nature of Call		
Advanced Life Support	2,882	3,282
Basic Life Support	2,552	2,652
Treatment / No Transport	74	98
Patient Refusal	1,217	1,233
Cancelled Enroute	311	358
Standby - Event	100	88
Standby - Fire	97	101
Mutual Aid	34	12
Miscellaneous	96	162
Total Responses	7,395	7,995

Source: Jerry Newell, Director, Pasquotank-Camden EMS. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, February 8, 2013.

Public Health Department: Albemarle Regional Health Services

Albemarle Regional Health Services (ARHS) is a regional Public Health agency in rural, northeastern NC serving the seven counties of Bertie, Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans. ARHS has provided over 70 years of service to the Albemarle Region.

The regional Public Health agency provides the following healthcare services: immunizations, diabetes care and management, women's preventive health, maternal health, including high-risk perinatal services, child health, WIC and nutrition counseling, pediatric asthma management,

services for people with communicable diseases including STDs, adult day health care, children's developmental services, Public Health preparedness and response, public information, interpreter assistance, home health care, and hospice.

Albemarle Regional Health Services also administers the following programs: Environmental Health, Regional Landfill, Solid Waste Authority and Recycling, LifeQuest Worksite Wellness, and the Inter-County Public Transportation Authority. The more than 29 ARHS operational sites are completely networked by technology to increase the efficiency and effectiveness of service delivery across the agency (43).

Pasquotank County Health Department

Services offered at the Pasquotank County Health Department, physically located in Elizabeth City, NC, include: clinical services, WIC, diabetes care, health education and promotion, environmental health, preparedness and response, Albemarle Home Care/Albemarle Hospice, Inter-County Public Transportation Authority, and Children's Developmental Services Agency.

Clinical Services

- **Adult Health.** Comprehensive physical assessments and clinical services are provided for all adults in an effort to detect and prevent chronic diseases, which may cause disability or premature mortality. The Breast and Cervical Cancer Control Program (BCCCP) provides access to screening services for financially and medically eligible women. The WiseWoman program provides cholesterol and bold pressure check-ups, as well as education to help lower the risk of heart disease and stroke. Women enrolled in BCCCP are eligible for WiseWoman.
- **Child Health.** Primary child health services are provided in an effort to detect problems so that appropriate interventions can begin as early as possible. The focus of *Care Coordination for Children (CC4C*) is the total well-being of the child; emotional, social, health, and environmental. Local agencies work as a team to ensure that optimal level of care for the child is achieved. The program goal of *Health Check* is to guarantee that Medicaid-eligible children receive all recommended child health services.
- **Immunizations.** Immunizations are provided to children and adults in an effort to prevent communicable diseases such as: polio, pertussis, tetanus, mumps, measles, rubella, diphtheria, and hepatitis. The goal is to have all children fully immunized by two years of age and then to receive recommended booster doses. Adult immunizations include the annual influenza and pneumonia campaign, in addition to all recommended adult immunizations.
- **General Communicable Disease.** Conducts surveillance of various communicable diseases and provides educational counseling for individuals. Presentations and overviews of potential biological, chemical, and nuclear agents can be given by the ARHS Team.
- **Sexually Transmitted Disease.** STD & HIV diagnosis, treatment, and counseling are available on a walk-in basis. There are no fees associated with STD services.
- **Women's Preventive Health.** Family Planning helps women and men maintain optimal reproductive health and assists families in determining the number, timing, and spacing of their children.
- **Maternal Health.** Primary Prenatal Health Care services are provided in an effort to reduce infant mortality and ensure that all pregnant women receive the highest level of health care. The health department maintains a close working relationship with the

area's private physicians and local hospitals for the provision of deliveries, emergency and specialized care. The High Risk Perinatal Clinic at the Pasquotank County Health Department was established to improve the pregnancy outcomes of women with pregnancy complications. In addition to comprehensive health care, patients receive nutrition education, medical social work intervention, and childbirth preparation and parenting education. *Pregnancy Care Management (PCM)* is an integral component of the maternal patient's health care services. PCM ensures that all health, social, mental and environmental needs are met.

Women, Infants and Children (WIC)

WIC is a federal program, funded by the US Department of Agriculture, designed to provide food to low-income pregnant, postpartum and breastfeeding women, infants and children until the age of five. The program provides a combination of nutrition education, supplemental foods, breastfeeding promotion and support, and referrals for health care. WIC has proven effective in preventing and improving nutrition related health problems within its population. All WIC clients must meet medical and financial eligibility requirements.

Diabetes Care

Due to the prevalence of diabetes within the region, ARHS provides a comprehensive Diabetes Care Center at the Pasquotank County Health Department for individuals living with diabetes and their families. The Albemarle Regional Diabetes Program works to council patients on blood sugar monitoring, physical activity, and proper nutrition. This program incorporates a team approach to diabetes care focusing on medical care, education, and health promotion. Individualized counseling, follow-up, nutrition education, disease management and referral are integral components of the program. The Albemarle Regional Diabetes Care program is recognized by the American Diabetes Association for Quality Self-Management Education.

Health Education and Health Promotion

The Health Education Team is responsible for the assessment and identification of community health issues and problems. While identifying diseases as significant health problems that cause disability, mortality, premature death, and morbidity, Health Education Specialists utilize tools and expertise to analyze demographics and socioeconomic status data of the individual client within the community.

After selecting target populations, Health Education staff assists in planning, implementing, and evaluating educational programs with community health partners to promote and maintain behavioral change with the individual.

The Team is primarily responsible for school and community health education programs, Public Health networking in the communities of care, patient education offered in the clinical setting, mass media education, the development and evaluation of educational materials, agency orientation/staff development, higher education-public health liaison work, coalition building and coordination, and grants management.

Environmental Health Services

ARHS Environmental Health ensures the health and safety of residents while reducing the threat of the spread of communicable diseases through evaluation and education of environmental health policies and regulations.

Programs managed by Environmental Health include: water and sewage inspections, swimming pool inspections, communicable disease investigations, food and lodging inspections, lead investigations, on-site wastewater, the Albemarle Regional Solid Waste Management Authority, and Perquimans-Chowan-Gates Solid Waste Management.

Public Health Preparedness and Response

Through its Public Health Preparedness and Response (PHP&R) program, ARHS aims to work with its constituent communities and local emergency management partners and response agencies to keep everyone safe and prepared for any natural or man-made disaster.

Albemarle Home Care and Albemarle Hospice

Albemarle Home Care provides skilled nursing, nurse aide, therapy, and other health care services in the home, working closely with and under the direction of the patient's physician. Albemarle Home Care is a Medicare Certified Home Health agency and a Medicare Certified Hospice, and is accredited by the Accreditation Commission for Health Care, Inc., and provides homecare and hospice services in northeastern NC, including the counties: Gates, Chowan, Perquimans, Pasquotank, Camden, and Currituck. Albemarle Home Care provides the following services: skilled nursing; physical therapy; speech therapy; occupational therapy; home health aide services; and medical social services.

Albemarle Hospice provides the following services: skilled nursing services; pain and symptom management; personal care by nursing assistants; family education regarding disease process, what to expect, and how to care for a loved one; spiritual and emotional support for patients and their families; bereavement support; prescription medications related to terminal illness; treatments for palliative care; durable medical equipment; medical supplies; respite; and short-term hospital care for symptom control.

Inter-County Public Transportation Authority (ICPTA)

This regional public transportation system was described in an earlier section of this report.

Children's Developmental Services Agency

The Children's Developmental Services Agency (CDSA) in Elizabeth City is one of 18 early intervention centers providing Infant Toddler services across NC. The counties served include Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank, Perquimans, Tyrrell and Washington. Staff consists of service coordinators and educational specialists, psychologists, speech-language pathologists, an occupational therapist, and a nurse. The CDSA serves children 0 to 3 years of age. The family, with the help of the CDSA, decides what goals are determined for the individual child. The CDSA monitors the services and makes appropriate changes as needed.

Health Department Utilization Data

ARHS has provided data on the utilization of agency services at the level of each county. Table 81 summarizes the demographic profile of clients who patronized the Pasquotank County Health Department in 2012 compared to averages for all of ARHS.

- Children under the age of 18 composed 29% of all Pasquotank County Health Department patients; ARHS-wide the comparable percentage was 31%.

- Persons ages 45-64 composed 18% of all health department patients in Pasquotank County; ARHS-wide the comparable percentage was 19%.
- The largest proportion of Pasquotank County Health Department patients—48%—was whites; 44% were African American. African Americans and whites each composed 47% of patients ARHS-wide.
- Females composed 69% of Pasquotank County Health Department patients and 75% of ARHS patients.

Table 81. Demographic Profile of Patients, Pasquotank County Health Department and ARHS: Age, Race and Sex (2012)

Demographic Parameter	Unduplicated Counts			
	Pasquotank		Agency-Wide	
	Patients	Visits	Patients	Visits
Age				
0-17	1,662	3,692	4,531	7,546
18-24	1,102	2,848	2,539	6,093
25-34	1,038	2,710	2,317	5,427
35-44	579	1,243	1,437	2,797
45-54	571	1,059	1,476	2,636
55-64	429	684	1,265	1,898
65+	327	626	899	1,609
Total	5,708	12,862	14,464	28,006
Race				
American Indian/Alaskan Native	4	13	10	21
Asian	71	166	121	254
Black/African American	2,525	5,949	6,388	13,214
Native Hawaiian/Pacific Islander	4	10	14	31
Unknown	383	1,017	582	1,402
White	2,721	5,707	7,349	13,084
Total	5,708	12,862	14,464	28,006
Sex				
Female	3,943	9,579	10,077	21,094
Male	1,765	3,283	4,387	6,912
Total	5,708	12,862	14,464	28,006

Source: Ginger Midgett, Albemarle Regional Health Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 25, 2013.

Table 82 summarizes the payer profile for services utilized by patients of the Pasquotank County Health Department in 2012. The list is organized according to program area.

- The largest proportion of all payers listed in connection with services utilized at the Pasquotank County Health Department—41%—was the “patient pay only” category.
- Adult Health was the Pasquotank County Health Department program with the largest number (1,212) and percent (45%) of “patient pay only” clients.
- Medicaid only, or some combination of Medicaid and another payer, composed the second largest proportion of all payers, 37%.
- HealthCheck Child Health Physicals was the program with the largest proportion of Medicaid payers (72%), which is expected since HealthCheck is a Medicaid-mandated program.

Table 82. Payer Profile, Pasquotank County Health Department (2012)

Program	Total Unduplicated Patients	Total Visits	Medicaid and Other	Medicaid and Commercial	Medicaid Only	Patient Pay Only	Tricare	Medicare B	Commercial Only	Total Payers Listed
Adult Health	2,217	3,569	64	4	160	1,212	41	71	376	1,928
Child Health	875	2,007	61	17	492	136	18	0	92	816
Family Planning	962	2,066	56	14	273	429	4	5	51	832
HealthCheck Child Health Physicals	779	936	21	8	502	114	11	0	80	736
Immunization	807	949	9	7	219	169	33	3	327	767
Maternal	275	1,465	53	12	158	25	3	0	0	251
Diabetes & Pregnancy Tests	573	974	62	1	146	152	27	138	49	575
STD	692	1,046	3	0	102	444	3	2	38	592
Tuberculosis	54	87	0	0	2	27	0	0	0	29
TOTAL	7,234	13,099	329	63	2,054	2,708	140	219	1,013	6,526

Source: Ginger Midgett, Albemarle Regional Health Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 25, 2013.

Federally-Qualified Health Centers

The Federally-Qualified Health Center (FQHC) benefit under Medicare was added effective October 1, 1991, when the Social Security Act was amended to qualify “safety net” providers such as community health centers, public housing centers, outpatient health programs funded by the Indian Health Service, and programs serving migrants and the homeless to receive enhanced reimbursement from Medicare and Medicaid, as well as other benefits.

The main purpose of the FQHC Program is to enhance the provision of primary care services in underserved urban and rural communities. FQHCs must serve an underserved area or population, offer a sliding fee scale, provide comprehensive services, have an ongoing quality assurance program, and have a governing board of directors. Certain tribal organizations and FQHC Look-Alikes (an organization that meets PHS Section 330 eligibility requirements, but does not receive grant funding) also may receive special Medicare and Medicaid reimbursement (44).

As of May 4, 2013, the US Health Resources and Services Administration (HRSA) listed one FQHC in Pasquotank County (Albemarle Regional Health Services), three in neighboring NC counties (Gateway Community Health Center – Tyner, Gateway Community Health Center – Gatesville, and Roanoke-Chowan Community Health Center/Colerain Primary Care), and four in southeast VA (45). The Gateway Health Center affiliates are described below.

Gateway Community Health Center

Gateway Community Health Centers, Inc., are Federally Qualified Health Centers (FQHC), affiliated with Albemarle Health. The Gateway Centers are supported in part by a grant from the United States Health Resources and Services Administration’s (HRSA) Bureau of Primary Health Care. Their goal is to improve the health of low-income Chowan, Gates, and Perquimans County residents by providing access to quality care. Staff at each location offer primary care and other health services on a sliding fee scale based on the patient’s income and family size. Gateway Community Health Centers also accept Medicare, Medicaid and most private insurance. There are four facilities in the local network (46):

Tyner Clinic (Tyner, NC)

Located inside the Northern Chowan Community Center, this clinic provides primary care to patients 18 years old and up. Services include sick visits, wellness and preventative visits, chronic disease management, health education, and laboratory testing. Staff includes a full time Adult Nurse Practitioner, a Registered Nurse, and support personnel.

Gateway Community Health Center of Gatesville (Gatesville, NC)

This clinic, located in Gates County, provides primary and minor emergency care for patients of all ages, including babies and children. Services include sick visits, wellness and preventative visits, chronic disease management, health education, stitches, X-rays, and laboratory and EKG testing. Staff includes a full time Family Practitioner medical doctor, a Family Nurse Practitioner, nurses, and support personnel.

Adolescent Care Clinic (Gatesville, NC)

Located on the campus of Gates County High School, this clinic provides primary care to students 10 to 19 years old and school faculty. Services include sick visits, wellness and preventative visits, chronic disease management, sports physicals, mental health counseling, health education, and laboratory testing. Staff includes a halftime Family Nurse Practitioner, a Registered Nurse, and a Licensed Practical Nurse.

Migrant and Seasonal Farm Worker Program (Elizabeth City, NC)

This center, in Spanish *Nuestra Casa de la Comunidad Hispana*, provides assistance and health programing focused on the local farm worker and Hispanic communities. Services include medical field clinics with a bilingual Case Manager, Outreach Worker and Registered Nurse/Family Nurse Practitioner providing health assessments and immunizations as well as HIV testing and TB skin testing; assistance in accessing existing health resources from both public agencies and private organizations; case management; interpretation services; advocacy; health education; and a tutoring program for grades K-5.

Albemarle Health has provided local data on the residence of patients who utilize Gateway Community Health Centers and the payers who cover their visits. Table 83 summarizes the percent of visits by ZIP code; Gateway patients include residents of Pasquotank County. Table 84 summarizes the payers.

According to data in Table 83:

- 14% of Gateway Community Health Center patients lived in Chowan County
- 72% resided in Gates County
- 11% resided in Pasquotank County
- 3% resided in Perquimans County

Table 83. Residence of Patients of Gateway Community Health Centers, by ZIP Code (2012)

ZIP Code	Town	County	% Patients
27932	Edenton	Chowan	11
27980	Tyner	Chowan	3
27937	Gates	Gates	22
27938	Gatesville	Gates	14
27979	Sunbury	Gates	10
27926	Corapeake	Gates	10
27946	Hobbsville	Gates	8
27935	Eure	Gates	8
27909	Elizabeth City	Pasquotank	11
29744	Hertford	Perquimans	3

Source: Sylvia Boone, Albemarle Health. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 28, 2013.

According to data in Table 84, the largest proportion of patients at Gateway Community Health Centers are self-pay (44%), followed by those covered by commercial insurance (31%).

Table 84. Payers for Patients of Gateway Community Health Centers (2012)

Payer	% Patients
Medicare	10
Medicaid	15
Commercial	31
Self-pay	44

Source: Sylvia Boone, Albemarle Health. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 28, 2013.

School Health

The Elizabeth City-Pasquotank Public Schools employs six full-time school nurses. In addition to the School Nursing Program the district also has a First Responder program to address the physical needs of the students. A Health Advisory Committee provides guidance to school staff regarding policy recommendations and health initiatives.

In the past few years the district participated in the Healthy Active Children initiative, which has significantly improved the physical health of students and staff and improved the quality of school lunches. Several schools in the district received national recognition from the Alliance for Healthy Active Children (47).

Table 85 presents SY2009-10 and SY2010-11 student to school nurse ratios for the four jurisdictions being compared.

The average student-to-school nurse ratio in Pasquotank County for the two-year period cited was 984:1, above the recommended maximum of 750:1. Data from the District gives the SY2011-2012 school nurse ratio as 977:1 (49).

Table 85 Student to School Nurse Ratio (SY2009-10 and SY2010-11)

Location	Student to School Nurse Ratio	
	SY2009-2010	SY2010-2011
Pasquotank County	987	981
Regional Average	713	712
Scotland County	484	473
State of NC	1,185	1,201

Source - NC DHHS, DPH, Women's and Children's Health, Facts & Figures, Data Reports & Publications. Annual School Health Services Reports, End-of-Year-Reports, years as listed. http://www.ncdhhs.gov/dph/wch/stats/.

Table 86 presents local data that Elizabeth City-Pasquotank Public Schools provided on school health for SY2011-12. This data, consolidated for the district, is included here primarily to illustrate the number and kinds of health issues with which school nurses must be concerned.

Table 86. School Health Nursing Survey Results, Elizabeth City-Pasquotank Public Schools (SY2011-12)

Nature of Activity	Services Provided/ Students Served	Nature of Activity	Services Provided/ Students Served
Health Counseling - Individual Session		**Health Care Procedures Administered (continued)**	
ADD/ADHD	239	Insulin pump	8
Asthma	415	Glucagon injection	13
Child abuse/neglect	51	Nebulizer treatment	60
Chronic illness not otherwise listed	27	Pulse oximeter	1
Depression (situational or chronic)	20	Respirator care	0
Diabetes	81	Shunt care	0
Hygiene	32	Tracheal suctioning (including tracheostomy care)	1
Mental health issues not otherwise listed	42	Stoma care (other than tracheal)	0
Pregnancy	2	Tube feeding	1
Puberty; reproductive health	17	Vagal Nerve Stimulator	1
Seizure disorders	8	Other	29
Severe allergies	40	**Identified Health Conditions among Students (Abridged list)**	
Sickle cell	2	ADD/ADHD	466
Substance abuse (including tobacco, prescription drugs, etc.)	0	Allergies (severe)	243
Suicidal ideation	1	Asthma	868
Violence/bullying	35	Autistic disorders, including Asperger's Syndrome	58
Injury/illness that began or occurred outside school	41	Cardiac condition	25
Student Medications		Cerebral palsy	23
Students on long-term medications	52	Diabetes Type I	18
Students on short-term medications	23	Diabetes Type II	5
Students on PRN (non-emergency) medications	94	Emotional/behavioral/psychiatric disorder not otherwise listed	49
Students on emergency medications	410	Gastrointestinal disorders (Crohn's, celiac disease, IBS, etc.)	9
Health Care Procedures Administered		Hearing loss	5
Blood glucose monitoring	22	Migraine headache	51
Clean intermittent catheterization	1	Obesity >95%ile BMI	0
Central venous line monitoring	0	Renal/adrenal/kidney conditions including Addison's disease	12
Diastat (rectal Valium)	0	Seizure disorder/epilepsy	37
Epinephrine auto injector	83	Visually impaired (uncorrectable)	3
Insulin injection	13	**Total Number of Students with Conditions**	2,049

Source: 2011-12 End of Year School Health Report, Section 2; personal communication from Holly M. Glenn, Director, Exceptional Children and Student Services, Elizabeth City-Pasquotank Public Schools. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, December 10, 2012.

Long-Term Care Facilities

The NC Division of Aging and Adult Services is the state agency responsible for planning, monitoring and regulating services, benefits and protections to support older adults, persons with disabilities, and their families. Among the facilities under the agency's regulatory jurisdiction are nursing homes, family care homes, and adult care homes. Each category of long-term care is discussed subsequently, but Table 87 lists by name all facilities in Pasquotank County.

Table 87. NC-Licensed Long-Term Care Facilities in Pasquotank County (November, 2012)

Facility Type/Name	Location	# Beds SNF (ACH)[1]	Star Rating (If applicable)
Adult Care Homes/Homes for the Aged			
Carolina House of Elizabeth City	Elizabeth City	76	4
Heritage Care of Elizabeth City	Elizabeth City	60	4
Waterbrooke of Elizabeth City	Elizabeth City	130	3
Family Care Homes			
House of Love	Elizabeth City	5	3
Nursing Homes/Homes for the Aged			
Kindred Transitional Care and Rehab - Elizabeth City	Elizabeth City	120 (0)	n/a
W.R. Winslow Memorial Home	Elizabeth City	146 (0)	n/a

[1] - SNF(ACH) = Maximum number of nursing or adult care home beds for which the facility is licensed.
Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Adult Care Homes, Family Care Homes, Nursing Facilities (by County); http://www.ncdhhs.gov/dhsr/reports.htm.

Nursing Homes

Nursing homes are facilities that provide nursing or convalescent care for three or more persons unrelated to the licensee. A nursing home provides long term care of chronic conditions or short term convalescent or rehabilitative care of remedial ailments, for which medical and nursing care are indicated. All nursing homes must be licensed in accordance with state law by the NC Division of Health Service Regulation Licensure Section (48).

Table 88 presents the number of nursing facility beds in the four jurisdictions being compared. Note that the local figures have not changed in seven years.

- At the time this report was prepared, there were two nursing homes in Pasquotank County offering a total of 266 beds: Kindred Transitional Care and Rehabilitation in Elizabeth City (120 beds) and W.R. Winslow Memorial Home in Elizabeth City (146 beds).

Table 88. Number of Nursing Facility Beds (2005-2011)

Location	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	266	266	266	266	266	266	266
Regional Average	118	118	118	118	118	118	118
Scotland County	207	207	207	207	207	207	207
State of NC	43,987	44,248	44,210	44,234	44,315	45,143	45,382

Note: this count includes beds licensed as nursing facility beds, meaning those offering a level of care less than that offered in an acute care hospital, but providing licensed nursing coverage 24 hours a day, seven days a week.
Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 513); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Adult Care Homes

Adult care homes are residences for aged and disabled adults who may require 24-hour supervision and assistance with personal care needs. People in adult care homes typically need a place to live, some help with personal care (such as dressing, grooming and keeping up with medications), and some limited supervision. Medical care may be provided on occasion but is not routinely needed. Medication may be given by designated, trained staff. These homes vary in size from *family care homes* of two to six residents to *adult care homes* of more than 100 residents. These homes were previously called "domiciliary homes," or "rest homes." The smaller homes, with two to six residents, are still referred to as family care homes. In addition, there are Group Homes for Developmentally Disabled Adults, which are licensed to house two to nine developmentally disabled adult residents (49).

Adult care homes are different from nursing homes in the level of care and qualifications of staff. They are licensed by the state Division of Health Service Regulation (Group Care Section) under State regulations and are monitored by Adult Home Specialists within county departments of social services. Facilities that violate licensure rules can be subject to sanctions, including fines.

- As cited previously, at the time this report was prepared there were three state-licensed adult care homes in Pasquotank County: Carolina House of Elizabeth City (76 beds), Heritage Care of Elizabeth City (60 beds) and Waterbrooke of Elizabeth City (130 beds).
- In addition, there was one state-licensed family care home in Pasquotank County, House of Love in Elizabeth City, offering a total of five beds.

In January, 2009, NC Division of Health Services Regulation introduced a “Star Rated Certificate” program to provide consumers with more information about the quality of care offered by the state’s adult care homes and family care homes. The Star Rated Certificate program is based on an inspections-related point scale, and ratings range from zero to four stars (50).

- As cited previously, of the three adult care homes in Pasquotank County, two were rated four stars and the other three stars.
- The one family care home in Pasquotank County was rated three stars.

Alternatives to Institutional Care

An alternative to institutional care preferred by many disabled and senior citizens is to remain at home and use community in-home health and/or home aide services. Table 89 below lists the home care, home health, and hospice providers in Pasquotank County. Note that there may be additional providers that refer to themselves as "home health service (or care) providers"; the table below lists only those licensed by the state.

Table 89. NC-Licensed Home Care, Home Health and Hospice Service Providers in Pasquotank County (As of May, 2013)

Provider Name	Location
Albemarle Home Care	Elizabeth City
Atlanticare Home Care Agency	Elizabeth City
Carolina East Home Care Agency	Elizabeth City
Coastal Rehabilitation, Inc.	Elizabeth City
Home Life Care, Inc.	Elizabeth City
Lincare, Inc.	Elizabeth City
Quality Home Staffing, Inc.	Elizabeth City
ResCare Home Care	Elizabeth City
Sentara Home Care	Elizabeth City

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Home Care All (by County); http://www.ncdhhs.gov/dhsr/reports.htm.

Table 90 presents a demographic profile of the clients of Albemarle Home Care – Home Health Division for FY2011-12.

- Approximately 39% of the agency's home health clients lived in Pasquotank County.

Table 90. Demographic Profile of Albemarle Home Care Home Health Division Clients (FY2011-12)

Demographic Parameter	Number of Clients	Demographic Parameter	Number of Clients
County of Residence		***Age (continued)***	
Camden	110	75-84	393
Chowan	293	85+	401
Currituck	267	Unknown	33
Gates	75	***Payer***	
Pasquotank	634	Medicare	980
Perquimans	253	Medicare HMO	31
Total Clients	1,632	Medicaid	472
Age		Medicaid HMO	0
0-17	32	Private Insurance	235
18-40	63	Private Insurance HMO	0
41-59	242	Indigent Non-Pay	7
60-64	126	Other	39
65-74	342	Total Payers	1,764

Source: Ginger Midgett, Albemarle Regional Health Services. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 28, 2013.

Adult Day Care/Adult Day Health Centers

Adult day care provides an organized program of services during the day in a community group setting for the purpose of supporting the personal independence of older adults and promoting their social, physical and emotional well-being. Also included in the service, when supported by funding from the Division of Aging and Adult Services (NCDAAS), are no-cost medical examinations required for admission to the program. Nutritional meals and snacks, as appropriate, are also expected. Providers of adult day care must meet State Standards for Certification, which are administrative rules set by the state Social Services Commission. These standards are enforced by the office of the Adult Day Care Consultant within the NCDAAS. Routine monitoring of compliance is performed by Adult Day Care Coordinators located at county departments of social services. Costs to consumers vary, and there is limited funding for adult day care from state and federal sources (51).

Adult day health services are similar programs to adult day care programs in that they provide an organized program of services during the day in a community group setting to support the personal independence of older adults and promote their social, physical, and emotional well-being. In addition, providers of adult day health services, as the name implies, offer health care services to meet the needs of individual participants. Programs must also offer referral to and assistance in using other community resources, and transportation to and from the program may be provided or arranged when needed and not otherwise available. Also included in the service, when supported by funding from the NCDAAS, are medical examinations required for individual participants for admission to day health care services and thereafter when not otherwise available without cost. Food and services to provide a nutritional meal and snacks as appropriate are expected as well (52).

Day Break

DayBreak, an affiliate of Albemarle Regional Health Services, provides care and support for adults who, due to frailty or physical disability, require assistance during the day. Daybreak provides a range of activities designed to promote social, physical, and emotional well-being. The agency's facility is located in Elizabeth City. Participants may be dropped off by family members, or transportation can be arranged. Services include: instruction/assistance with personal care and health care; nutritious meals and daily snacks; appropriate physical activities; educational/cultural programs; and social/recreational activities (53).

Mental Health Services and Facilities

The unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS). In NC, the mental health system is built on a system of Local Management Entities (LMEs). LMEs are agencies of local government—area authorities or county programs—that are responsible for managing, coordinating, facilitating and monitoring the provision of mental health, developmental disabilities and substance abuse services in the catchment area served. LME responsibilities include offering consumers 24/7/365 access to services, developing and overseeing providers, and handling consumer complaints and grievances (54).

At the time this report was prepared, the LME for Pasquotank County was East Carolina Behavioral Health (ECBH). ECBH serves a total of 19 counties in eastern NC, facilitating mental health services for both children and adults. Services offered include: diagnostic assessment, outpatient therapy, multi-systemic therapy, psychosocial rehabilitation, developmental therapy, intensive in-home services, medication management, substance abuse residential care, day treatment, community respite, group living, supportive living, supportive employment, substance abuse treatment (outpatient and residential), day activity and vocational program for the developmentally disabled, personal assistance, and targeted case management.

Table 91 (on the following page) lists ECBH network providers serving Pasquotank County residents.

It should be noted that the list of ECBH providers is a master list of those offering services throughout the LME's 19-county service area; however, several providers were physically located in Pasquotank County.

Table 91. East Carolina Behavioral Health Network Providers Serving Pasquotank County (As of September, 2012)

Provider	Location (Nearest, if Several)	Service	Age Group
A Plus Results Independent Living, Inc.	Plymouth	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Act Medical Group, PA	Numerous	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Albemarle Hospital	Elizabeth City	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Albemarle Psychological Innovations	Elizabeth City	Mental Health	Child/Adult
Anointed Mental Health, LLC	Greenville	Mental Health, Substance Abuse	Child/Adult
ARC of NC	Elizabeth City, Ahoskie	Developmental Disability, Mental Health	Child/Adult
Axford, Mary Claire, LCSW	Nags Head	Mental Health	Child/Adult
Benjamin House Community Services	Elizabeth City	Developmental Disability, Substance Abuse	Child/Adult
Bowens, William C., MD	Elizabeth City	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Buscemi, Cary S. / Sea Oats Counseling	Nags Head	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Career Fulfillment Services, PLLC	Greenville	Mental Health	Child/Adult
Carolinaeast Medical Center	New Bern	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Catholic Charities of the Diocese of Raleigh, Inc.	Hertford	Mental Health	Child/Adult
Chasteen, Athena, LCSW	Elizabeth City	Mental Health, Substance Abuse	Adult
Children and Family Counseling Services	Nags Head	Mental Health	Child/Adult
Crisp, Bryan, MA, LMFT, BCBA	Greenville	Developmental Disability, Mental Health	Child/Adult
Dickinson, Patricia S., PhD	Havelock	Developmental Disability, Mental Health	Child/Adult
Dixon Social Interactive Services, Inc.	Washington	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Dream Provider Care Services, Inc.	Plymouth, Edenton, Columbia	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Eastern Psychiatric & Behavioral Specialists, PLLC	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
ECU Physicians Pediatrics	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
ECU Physcians Psychiatry Outpatient Center	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Evans Health Psychological Services	Ahoskie	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Hoffmier, Elizabeth G., LCSW	Nags Head	Mental Health	Child/Adult
Hunsberger, Hilary K., LCSW	Elizabeth City	Mental Health	Child/Adult
Integrated Family Services	Elizabeth City, Ahoskie	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Jaworski, Jeffrey A., LPC, LCAS	Nags Head	Mental Health, Substance Abuse	Child/Adult
Johnston, Edward Angus, MS, CRC, LCAS, LPC	Greenville	Mental Health, Substance Abuse	Child/Adult
Johnston, Grace G., MSW, LCSW, LCAS	Greenville	Mental Health, Substance Abuse	Child/Adult
Kenyear, Stephanye A., RN, NP, PLLC	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Life, Inc.	Goldsboro	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Making the Difference Services, LLC	Greenville	Developmental Disability, Mental Health	Child/Adult
Martin General Hospital	Williamston	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Medical Park Psychiatric Associates	Greenville	Mental Health	Adult
Minor-Schork, Debra, RN, LLC	Edenton	Mental Health	Adult
Monarch	Manteo	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
New Bern Professional Health Services, PC	New Bern	Developmental Disability, Mental Health	Child/Adult
New Hope Counseling Services, PA	Washington	Mental Health	Child/Adult
OneCare Behavioral Health System	Elizabeth City	Mental Health, Substance Abuse	Child/Adult
Pathways Counseling Center	Elizabeth City	Mental Health, Substance Abuse	Child/Adult
Peele Counseling, PLLC	Nags Head	Mental Health, Substance Abuse	Child/Adult
PORT Human Services	Nags Head	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Precision Health Care Services, Inc.	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Pride in North Carolina	Elizabeth City	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Recovery Innovations - Wellness City	Greenville	Mental Health, Substance Abuse	Adult
Rescare Inc., CNC/Access, Inc	Nags Head	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Roberts, Christopher James, LCSW, LCAS	Manteo	Mental Health, Substance Abuse	Child/Adult
Roberts, Kelly, LCSW	Manteo	Mental Health, Substance Abuse	Child/Adult
Rosenke, Dorothy, PsyD	Elizabeth City	Developmental Disability, Mental Health	Child/Adult
Sandalwood Counseling	Nags Head	Mental Health	Child/Adult
Scott, Jean D., CCSW, LCSW, RN	Elizabeth City	Mental Health	Adult
The Outer Banks Hospital	Nags Head	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Thomas, Elizabeth M., LPC	Elizabeth City	Mental Health	Child/Adult
Vidant Adult Behavioral Health Center	Ahoskie	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Vidant Bertie Hospital	Windsor	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Vidant Chowan Hospital	Edenton	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Vidant Medical Group, UHS Physicians, LLC	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult
Vidant Medical Center	Greenville	Developmental Disability, Mental Health, Substance Abuse	Child/Adult

Source: East Carolina Behavioral Health Provider Network Directory, September 2012

There is a list of NC-licensed mental health *facilities* (not service providers) physically located in Pasquotank County, as shown in Table 92. The facilities in this list provide a range of services from day treatment to supervised living.

Table 92. NC-Licensed Mental Health Facilities in Pasquotank County (G.S. 122C) (November, 2012)

Operator/Name of Facility	Location	Category	Capacity
ABHS, Inc 1331 Four Forks Road	Elizabeth City	Supervised living, developmentally disabled adult	3
Baxter Street Pride in NC, Inc.	Elizabeth City	Residential Treatment Level III	4
Benjamin House	Elizabeth City	Supervised living, developmentally disabled adult	12
Christian Medical Center, Inc.	Elizabeth City	Residential Treatment Level III	4
	Elizabeth City	Substance Abuse Intensive Outpatient Program	n/a
	Elizabeth City	Day Treatment	n/a
Church Street	Elizabeth City	Residential Treatment Level III	4
Emerald Lake	Elizabeth City	Supervised living, developmentally disabled adult	3
Family Advantage, LLC	Elizabeth City	Day Treatment; psychosocial rehabilitation	n/a
H.L. Trigg Community Center	Elizabeth City	Day Treatment	n/a
One Care Behavioral Treatment Center	Elizabeth City	Day Treatment	n/a
(North Road Street facility)		Substance Abuse Intensive Outpatient Program	n/a
One Care Behavioral Treatment Center	Elizabeth City	Psychosocial rehabilitation; Day Treatment	n/a
(East Main Street facility)		Substance Abuse Intensive Outpatient Program	n/a
		Substance Abuse Comprehensive Outpatient Treatm	n/a
Our Home is Your Home	Elizabeth City	Supervised living, developmentally disabled adult	5
Peartree	Elizabeth City	Supervised living, developmentally disabled adult	3
PORT Human Services	Elizabeth City	Substance Abuse Intensive Outpatient Program	n/a
PORT Human Services - Harbor House	Elizabeth City	Psychosocial rehabilitation	n/a
River City Advancement Center - Pasquotank	Elizabeth City	Day Activity	n/a
Rosewood Court	Elizabeth City	Supervised living, developmentally disabled adult	3
The Scott House	Elizabeth City	Supervised living, developmentally disabled adult	5

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Mental Health Facilities (G.S. 122C) (by County); http://www.ncdhhs.gov/dhsr/reports.htm .

Other Healthcare Resources

Table 93 lists other healthcare facilities in the Albemarle Region that are licensed by the state of NC.

- As of March, 2013 there were no NC-licensed ambulatory surgical facilities or nursing pools in the Albemarle Region.
- There were two NC-licensed cardiac rehabilitation facilities in the region: the Cardiopulmonary Rehabilitation Program at Albemarle Hospital in Elizabeth City and HealthSteps in Edenton.

Table 93. Other NC Licensed Healthcare Facilities in the Albemarle Region (As of March, 2013)

Type and Name of Facility	County	Location
Licensed Ambulatory Surgical Facilities		
None		
Licensed Cardiac Rehabilitation Facilities		
Albemarle Hospital Cardio-Pulmonary Rehabilitation Program	Pasquotank	Elizabeth City
HealthSteps	Chowan	Edenton
Licensed Nursing Pools		
None		

Source - NC Department of Health and Human Services, Division of Health Services Regulation (DHSR), Licensed Facilities, Hospitals (by County); http://www.ncdhhs.gov/dhsr/reports.htm.

Dialysis Centers

Table 94 lists dialysis centers in the Albemarle Region, one of which was physically located in Pasquotank County, in Elizabeth City.

Table 94. Dialysis Centers in the Albemarle Region (2012)

Name of Facility	County	Location	Features
BMA of Windsor	Bertie	Windsor	20 hemodialysis stations, no evening hours
Edenton Dialysis	Chowan	Edenton	17 hemodialysis stations; no evening hours
Elizabeth City Dialysis	Pasquotank	Elizabeth City	24 hemodialysis stations; no evening hours

Source: Dialysis Facility Compare, http://www.Medicare.gov/Dialysis/Include/DataSection/Questions.

Urgent Care Centers

There is one free-standing urgent care center listed for Pasquotank County, First Choice Urgent Care in Elizabeth City. County residents with urgent (and evening, weekend and holiday) health issues also are likely to report to the emergency department of Albemarle Hospital or another area hospital.

Other Pasquotank County Medical Practices and Practitioners

There are literally hundreds of medical providers in Pasquotank County, and a complete list is beyond the scope of this assessment. However, there are several “tools” available to help county residents locate providers.

Albemarle Health Physician Directory

Albemarle Health provides on its website a list, searchable by name or specialty, of the more than 100 physicians on its staff representing nearly 30 specialties. Search results are returned in a printable format.
Portal: http://www.albemarlehealth.org/find-a-physician/

Yellow Pages Directory

The online Yellow Pages directory for Elizabeth City lists over 290 entries in the category, "Doctors". The search site includes direct links to a separate listing that provides details on contact information, location, hours of operation, other business details (if available), and a link to a website (if available) for each provider.
Portal: http://www.yellowpages.com/elizabeth-city-nc/doctors

The Yellow Pages Directory may be useful for searching a variety of health and wellness services, facilities and providers, including counselors, dentists, fitness/recreation centers, support groups, etc.

Recreational Facilities

In July 2010 the Elizabeth City and Pasquotank County Parks and Recreation Departments merged into the Elizabeth City/Pasquotank County Parks and Recreation Department. The Department now has 36 parks and public use areas and continues to grow to meet the recreational needs of area residents (55).

Table 95 lists some of the public parks and recreational centers in Pasquotank County. Table 96 lists private facilities various Internet searches revealed on May 5, 2013.

Table 95. Public Recreational Facilities in Pasquotank County

Category/Name	Location	Facilities/Programs
Knobbs Creek Recreation Center	Elizabeth City	Indoor facility; basketball, volleyball, bridge, group fitness classes, art classes, table tennis; meeting spaces for rent; location of the Pasquotank-Camden Senior Center
Causeway Park	Elizabeth City	Boardwalk through wetlands along Pasquotank River; landings, piers
Chalk Street Tot Lot	Elizabeth City	Designed for small children; playground equipment, benches
Charles Creek Park	Elizabeth City	Along waterfront; fishing, outdoor games, boating, volleyball, picnicking
College of the Albemarle Canoe Launch	Elizabeth City	Canoe launch
Dog Corner Park	Elizabeth City	Open space park; boat ramp, beach volleyball courts; available for rent
Edgewood Play Lot	Elizabeth City	Designed for small children; playground equipment, benches; picnic tables
Elizabeth Street Triangle Park	Elizabeth City	Playground equipment; open area for games
Elizabeth Street Tennis Courts	Elizabeth City	Four lighted, asphalt courts; open play area adjacent; open all year
Enfield Recreation Area	Elizabeth City	Two lighted tennis courts, lighted basketball courts, 5 lighted ball fields (3 lighted); ball fields may be rented
George Wood Park	Elizabeth City	Three boardwalks; pier; 2 gazebos
Goat Island Camping Platforms	Elizabeth City	Two camping platforms
Gosnold Park	Elizabeth City	Playground equipment, softball field, basketball court; wooded
Holmes Field	Elizabeth City	Irrigated and lighted baseball field
Knobbs Creek Park	Elizabeth City	Nine-hole par-three golf course; picnic and fitness areas; horseshoe pits; children's play area
Mariner's Wharf	Elizabeth City	Public boat slips; brick walks; picnic tables
Moth Boat Park	Elizabeth City	Along Pasquotank River; park benches
Northeastern Park	Elizabeth City	Six lighted tennis courts, two lighted regulation soccer fields, one unlighted youth soccer field, one lighted baseball field, one lighted softball field, two sand volleyball courts; fitness track with exercise stations; playground; regulation track for running or walking; concession stand; bathroom facilities
Northside Road Camping Platforms	Elizabeth City	Two camping platforms
Pasquotank-Perquimans County Line Boat Ramp	Elizabeth City	Canoe ramp
Pool Street Park	Elizabeth City	Fountain, benches; trees and flowers
River Road Athletic Complex	Elizabeth City	Five lighted soccer fields, two of which are suitable for youth football; playground, picnic shelter, walking trail
Sawmill Park	Elizabeth City	Public boat ramp and boardwalk
Southern and Dawson Play Lot	Elizabeth City	Lighted asphalt basketball court, playground equipment, fishing pier, picnic area
South Park Sports Complex	Elizabeth City	Five lighted softball/baseball fields; playground, pavilion, batting cages, golf driving range; concession stand, restrooms, conference room
Walking Trails	County-wide	There are over 130 neighborhood walking trails throughout the county; the county Parks and Recreation lists the length of each trail on its website.
Waterfront Park	Elizabeth City	Along the Pasquotank River; two boat ramps, picnic tables, park benches, pavilion, boardwalk, pier

Sources:
The City of Elizabeth City, NC; Site Index, The Parks and Recreation Department;
http://www.cityofec.com/index.asp?Type=B_BASIC&SEC={F9BCA570-C73F-48C0-A761-89BE5AD58A32}
Pasquotank County, NC, Departments, Parks and Recreation, Neighborhood Walking Mileage;
http://www.co.pasquotank.nc.us/Departments/park/walkingtrails.cfm.

Table 96. Private Recreational Facilities in Pasquotank County

Category/Name	Location	Facilities/Programs
Fitness Warehouse	Elizabeth City	Gym
Curves	Elizabeth City	Gym equipment; circuit training
C & C Reshaping Party	Elizabeth City	Beauty salon, health club
Fit for Women	Elizabeth City	Gym equipment
Pines Country Club, Inc.	Elizabeth City	Semi-private golf club; 18-hole course, saltwater swimming pool

Source: Various Internet sites

CHAPTER FOUR: HEALTH STATISTICS

METHODOLOGY

Routinely collected mortality and morbidity surveillance data and behavior survey data can be used to describe the health status of Pasquotank County residents. These data, which are readily available in the public domain, typically use standardized definitions, thus allowing comparisons among county, state and national figures. There is, however, some error associated with each of these data sources. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on reports submitted by health care facilities across the state and are likely to miss a number of cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

Understanding Health Statistics

Age-adjustment

Mortality rates, or death rates, are often used as measures of the health status of a community. Many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because the risk of death inevitably increases with age; that is, as a population ages, its collective risk of death increases. Therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportions of “young” people, and others have a higher proportion of “old” people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professionals responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NC SCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are preferred for comparing health data from one population or community to another and have been used in this report whenever available.

Aggregate Data

Another convention typically used in the presentation of health statistics is *aggregate data,* which combines annual data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-year data consisting of relatively few cases or deaths. It is particularly important to aggregate data for smaller jurisdictions like Pasquotank County. The calculation is performed by dividing the number of cases or deaths due to a particular disease over a period of years by the sum of the population size for each of the years in the same period.

Incidence

Incidence is the population-based rate at which new cases of a disease occur and are diagnosed. It is calculated by dividing the number of newly diagnosed cases of a disease or condition during a given period by the population size during that period. Typically, the resultant value is multiplied by 100,000 and is expressed as cases per 100,000; sometimes the multiplier is a smaller number, such as 10,000.

Incidence rate is calculated according to the following formula:

(number of new cases/population) x 100,000 = new cases per 100,000 people

The incidence rates for certain diseases, such as cancer, are simple to obtain, since data on newly discovered cases is routinely collected by the NC Central Cancer Registry. However, diagnoses of other conditions, such as diabetes or heart disease, are not normally reported to central data-collecting agencies, so accurate incidence data on these conditions is rare.

Mortality

Mortality is calculated by dividing the number of deaths due to a specific disease in a given period by the population size in the same period. Like incidence, mortality is a rate, usually presented as number of deaths per 100,000 residents. Mortality rates are easier to obtain than incidence rates since the underlying (or primary) cause of death is routinely reported on death certificates. However, some error can be associated with cause-of-death classification, since it is sometimes difficult to choose a single underlying cause of death from potentially many co-occurring conditions.

Mortality rate by cause is calculated according to the following formula:

(number of deaths due to a cause/population) X 100,000 = deaths per 100,000 people

Morbidity

Morbidity as used in this report refers generally to the presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the population. Morbidity data usually is presented as a prevalence percentage, or a count, but not a rate.

Prevalence

Prevalence, which describes the extent of a problem, refers to the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence expresses a proportion, not a rate. Prevalence is often estimated by consulting hospital records; for instance, hospital discharge records available from NC SCHS show the number of residents within a county who use hospital in-patient services for given diseases during a specific period. Typically, these data underestimate the true prevalence of the given disease in the population, since individuals who do not seek medical care or who are diagnosed outside of the hospital in-patient setting are not captured by the measure. Note also that

decreasing hospital discharge rates do not necessarily indicate decreasing prevalence; rather they may be a result of a lack of access to hospital care.

Trends

Data for multiple years is included in this report wherever possible. Since comparing data on a year-by-year basis can yield very unstable trends due to the often small number of cases, events or deaths per year (see below), the preferred method for reporting incidence and mortality data is long-term trends using the age-adjusted, multi-year aggregate format. Most trend data used in this report is of that type.

Small Numbers

Year-to-year variance in small numbers of events can make dramatic differences in rates that can be misleading. For instance, an increase from two events one year to four the next could be statistically insignificant but result in a calculated rate increase of 100%. Aggregating annual counts over a five year period before calculating a rate is one method used to ameliorate the effect of small numbers. Sometimes even aggregating data is not sufficient, so the NC State Center for Health Statistics recommends that all rates based on fewer than 20 events—whether covering an aggregate period or not—be considered “unstable”, and interpreted only with caution. In recent years, the NC SCHS has suppressed mortality rates based on fewer than 20 events in a five-year aggregate period. Other state entities that report health statistics may use their own minimum reporting thresholds. To be sure that unstable health data do not become the basis for local decision-making, this report will highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period and on 10 or more events in a single year. Where exceptions occur, the narrative will highlight the potential instability of the rate being discussed.

Describing Difference and Change

In describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or location—both of which appear frequently in this report—it is useful to apply the concept of percent difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the scope or significance of the difference or change. Converting the amount of difference or change to a *percent* takes into account the relative size of the numbers that are changing in a way that simple subtraction does not, and makes it easier to grasp the meaning of the change.

For example, there may be a rate for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. Although the same, these simple numerical differences are not of the same significance in both instances. In the first example, converting the 6 point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6 point difference to a percent yields a relative change factor of 2.8%; that is, the smaller number in the comparison increased by a relatively small fraction. In these examples the application of

percent makes it very clear that the difference in the first example is of far greater degree than the difference in the second example. This document uses percentage almost exclusively to describe and highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.)

Behavioral Risk Factor Surveillance System (BRFSS)

Pasquotank County residents participate in the state's annual Behavioral Risk Factor Surveillance System (BRFSS) Survey, as part of an aggregate 41-county sample that encompasses the entire eastern third of NC. It is not possible to isolate survey responses from Pasquotank County BRFSS participants without oversampling the county, which rarely occurs. Since the aggregate regional data covers such a diverse area, the results cannot responsibly be interpolated to describe health in Pasquotank County. As a result, BRFSS data will not be used in this document *except* for local BRFSS data manipulated by the CDC to yield a county-level *estimate*.

Final Health Data Caveat

Some data that is used in this report may have inherent limitations, due to sample size, or its age, for example, but is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

HEALTH RANKINGS

America's Health Rankings

Each year for more than 20 years, America's Health Rankings™, a project of United Health Foundation, has tracked the health of the nation and provided a comprehensive perspective on how the nation—and each state—measures up. America's Health Rankings is the longest running state-by-state analysis of health in the US.

America's Health Rankings are based on several kinds of measures, including *determinants* (socioeconomic and behavioral factors and standards of care that underlie health and well-being) and *outcomes* (measures of morbidity, mortality, and other health conditions). Together the determinants and outcomes help calculate an overall rank. Table 97 shows where NC stood in the 2012 rankings relative to the "best" and "worst" states, where first-ranked is best.

Table 97. Rank of North Carolina in America's Health Rankings (2012)

Location	National Rank (Out of 50)[1]		
	Overall	Determinants	Outcomes
Vermont	1	1	5
North Carolina	33	31	38
Mississippi/Louisiana (tie)	49	49/50	50/49

United Health Foundation, 2012. America's Health Rankings; http://www.americashealthrankings.org/NC/2012.

County Health Rankings

Building on the work of *America's Health Rankings*, the Robert Wood Johnson Foundation, collaborating with the University of Wisconsin Population Health Institute, undertook a project to develop health rankings for the counties in all 50 states. In this project, each state's counties are ranked according to health outcomes and the multiple health factors that determine a county's health. Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment.

Table 98 presents the 2013 county rankings for Pasquotank County, the ARHS regional average and Scotland County in terms of health outcomes and health factors; Table 99 presents additional detail for these jurisdictions as well as the average for NC and national benchmarks.

- Pasquotank County ranks 52nd overall in NC, chiefly due to a very poor risk behavior ranking (98th) and a relatively poor morbidity ranking (60th).
- The best Pasquotank County rankings are in the health factors of clinical care (14th) and physical environment (22nd).

It should be noted that the County Health Rankings serve a limited purpose, since the data on which they are based in some cases is very old and different parameters are measured in different time periods.

Table 98. County Health Rankings (2013)

Location	County Rank (Out of 100)[1]						
	Health Outcomes		Health Factors				Overall
	Mortality	Morbidity	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	
Pasquotank County	49	60	98	14	49	22	52
Regional Average	49	60	57	43	38	26	53
Scotland County	96	88	92	63	100	88	93

County Health Rankings and Roadmaps, 2013. University of Wisconsin Population Health Institute; http://www.countyhealthrankings.org/app/north-carolina/2013/rankings/outcomes/overall/by-rank.

Table 99. County Health Rankings Details (2013)

Health Factor		Pasquotank County	*ARHS Regional Average*	Scotland County	NC County Average	National Benchmark[1]
Mortality						
	Premature deaths	8,052	8,109	11,100	7,480	5,317
Morbidity						
	Poor or fair health	21%	21%	25%	18%	10%
	Poor physical health days	3.4	4.1	3.8	3.6	2.6
	Poor mental health days	3.6	3.0	3.2	3.4	2.3
	Low birthweight	10.2%	10.5%	12.4%	9.1%	6.0%
Health Factors						
Health Behaviors						
	Adult smoking	35%	23.5%	26%	21%	13%
	Adult obesity	33%	33%	36%	29%	25%
	Physical inactivity	26%	28%	29%	25%	21%
	Excessive drinking	14%	11%	9%	13%	7%
	Motor vehicle crash death rate	12	23	24	17	10
	Sexually transmitted infections	588	407	490	441	92
	Teen birth rate	44	44	70	46	21
Clinical Care						
	Uninsured	18%	0	19%	19%	11%
	Primary Care physicians	1939:1		1245:1	1480:1	1067:1
	Dentists	3127:1		4203:1	2171:1	1516:1
	Preventable hospital stays	53	68	84	63	47
	Diabetic screening	86%	86%	83%	88%	90%
	Mammography screening	75%	72%	67%	69%	73%
Social & Economic Factors						
	High school graduation	84%	82%	76%	80%	N/A
	Some college	56%	53%	41%	62%	70%
	Unemployment	10.8%	9.8%	17.5%	10.5%	5.0%
	Children in poverty	31%	27%	44%	25%	14%
	Inadequate social support	15%	15%	23%	21%	14%
	Children in single-parent households	31%	36%	54%	35%	20%
	Violent crime rate	487	210	530	411	66
Physical Environment						
	Daily fine particulate matter	12.3	12	13.2	12.9	8.8
	Drinking water safety	0%	0%	3%	3%	0%
	Access to recreational facilities	10	5	6	11	16
	Limited access to healthy foods	9%	4%	8%	7%	1%
	Fast food restaurants	47%	47%	54%	49%	27%

Source: County Health Rankings and Roadmaps, 2012. University of Wisconsin Population Health Institute; http://www.countyhealthrankings.org/app/north-carolina/2012/rankings/outcomes/overall.

MATERNAL AND INFANT HEALTH

Pregnancy

The following definitions and statistical conventions will be helpful in understanding the data on pregnancy:

- Reproductive age = 15-44
- Total pregnancies = live births + induced abortions + fetal death at 20+ weeks gestation
- Pregnancy rate = number of pregnancies per 1,000 women of reproductive age
- Fertility rate = number of live births per 1,000 women of reproductive age
- Abortion rate = number of induced abortions per 1,000 women of reproductive age
- Birth rate = number of live births per 1,000 *population (Note that in the birth rate calculation the denominator includes the entire population, both men and women, not just women of reproductive age.)* Since the birth rate is a measure of population growth, it was presented among the demographic data in Chapter One of this report.

Pregnancy, Fertility and Abortion Rates, Women Age 15-44

Table 100 presents total annual pregnancy, fertility and abortion rates for women age 15-44 for the period from 2007-2011.

- The *total pregnancy rate* in Pasquotank County was the highest among the four jurisdictions in 2007 and 2009, second-highest in 2008 and 2010, and third-highest in 2011. The total pregnancy rate in Pasquotank County decreased by 22% overall between 2007 and 2011.
- The *total fertility rate* in Pasquotank County was second- or third highest among the comparators in every year cited. The total fertility rate in Pasquotank County decreased by 18% overall between 2007 and 2011.
- The *total abortion rate* in Pasquotank County was the highest among the comparators in every year cited. The total abortion rate in Pasquotank County decreased by 35% overall between 2007 and 2011.

Table 100. Total Pregnancy, Fertility and Abortion Rates, Ages 15-44 (Single Years, 2007-2011)

Location	Females Ages 15-44														
	2007			2008			2009			2010			2011		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Pasquotank County	91.5	71.8	19.1	81.9	66.6	14.9	83.1	64.3	18.7	82.6	64.5	17.6	71.8	58.6	12.5
Regional Average	77.9	65.0	12.4	69.0	56.4	12.3	69.7	56.0	13.2	71.5	57.9	13.3	67.2	56.7	10.2
Scotland County	85.9	73.0	11.8	76.1	64.4	11.1	78.9	65.2	13.4	85.4	72.9	12.4	79.1	67.7	10.7
State of NC	84.7	69.1	15.1	83.9	69.1	14.4	78.9	65.1	13.4	76.4	62.7	13.2	73.3	61.5	11.4

Note: Bold type indicates an unstable rate based on a small number (fewer than 10 cases)
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; http://www.schs.state.nc.us/SCHS/data/databook/.

Beginning in 2010, NC SCHS began reporting stratified pregnancy, fertility and abortion data in a different manner than previously. Prior to 2010 the data was stratified by “total”, “white” and “minority”. After that date and to the present time, the data has been stratified by “total”, “White non-Hispanic”, “African-American non-Hispanic”, “Other non-Hispanic”, and “Hispanic”. Because of this change, stratified data prior to 2010 is not directly comparable to 2010 and 2011

data. Table 101 presents pregnancy, fertility, and abortion rates stratified according to the new model.

- Pregnancy and fertility rates among Pasquotank County Hispanics exceeded those of the other racial and ethnic groups in the county in 2010 and 2011. Pregnancy rates for African American, non-Hispanic women were higher than the comparable rates for white non-Hispanic women, but the reverse was true for fertility rates.

Table 101. Pregnancy, Fertility and Abortion Rates, Ages 15-44, Stratified by Race/Ethnicity (2010 and 2011)

Location	Females Ages 15-44					
	2010			2011		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Pasquotank County Total	82.6	64.5	17.6	71.8	58.6	12.5
White, Non-Hispanic	79.9	68.9	11.0	69.7	61.4	7.5
African American, Non-Hispanic	85.0	57.5	26.7	70.5	52.6	17.1
Other, Non-Hispanic	81.8	75.5	**6.3**	86.2	74.7	**11.5**
Hispanic	86.5	78.4	**5.4**	91.6	76.3	**15.3**
Regional Average Total	71.5	57.9	13.3	67.2	56.7	10.2
White, Non-Hispanic	67.1	58.0	8.5	61.3	54.5	6.6
African American, Non-Hispanic	79.8	58.1	21.5	70.8	54.7	15.7
Other, Non-Hispanic	61.3	60.4	0.9	73.2	63.8	9.4
Hispanic	65.6	52.1	13.1	82.1	76.2	5.9
Scotland County Total	85.4	72.9	12.4	79.1	67.7	10.7
White, Non-Hispanic	67.0	60.3	6.7	59.7	55.3	4.4
African American, Non-Hispanic	99.5	78.1	21.1	97.2	77.3	19.1
Other, Non-Hispanic	102.9	96.9	**5.9**	87.9	80.5	**4.2**
Hispanic	**65.7**	**65.7**	**0.0**	**60.4**	**53.7**	**6.7**
State of NC Total	76.4	62.7	13.2	73.3	61.5	11.4
White, Non-Hispanic	65.6	57.1	8.2	63.6	56.4	7.0
African American, Non-Hispanic	86.1	61.0	24.4	81.5	59.7	21.1
Other, Non-Hispanic	84.5	71.3	12.8	80.6	69.4	10.9
Hispanic	114.0	99.0	14.7	106.6	94.0	12.2

Note: Bold type indicates an unstable rate based on a small number (fewer than 10 cases)
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; http://www.schs.state.nc.us/SCHS/data/databook/.

Pregnancy, Fertility and Abortion Rates, Women Age 15-19

Table 102 presents total annual pregnancy, fertility and abortion rates for women age 15-19 ("teens") for the period from 2007-2011.

- The *total pregnancy rate* for Pasquotank County teens was the lowest among the comparators in every year cited except 2009. The total pregnancy rate among Pasquotank County teens fell by 38% overall between 2007 and 2011.
- The *total fertility rate* among Pasquotank County teens was lowest or second-lowest in all years cited. The total fertility rate among Pasquotank County teens decreased by 54% overall between 2007 and 2011.

- The *total abortion rate* among Pasquotank County teens was the highest among the comparators in every year. The total abortion rate among Pasquotank County teens decreased by 21% overall between 2007 and 2011.

Table 102. Total Pregnancy, Fertility and Abortion Rates, Ages 15-19 (Single Years, 2007-2011)

Location	Females Ages 15-19														
	2007			2008			2009			2010			2011		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Pasquotank County	66.2	49.2	17.0	48.9	35.3	12.9	60.2	41.9	18.3	42.3	29.7	12.6	41.3	22.7	13.5
Regional Average	68.0	52.3	15.1	49.2	38.6	10.5	55.1	40.9	13.3	47.7	37.9	11.4	41.5	30.7	9.7
Scotland County	94.7	78.9	12.9	85.1	74.0	11.1	81.3	70.0	11.3	82.0	73.9	8.1	82.5	69.8	12.8
State of NC	63.0	48.4	14.3	58.6	45.7	12.5	56.0	43.4	12.2	49.7	38.3	11.0	43.8	34.8	8.7

Note: Bold type indicates an unstable rate based on a small number (fewer than 10 cases)
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 103 presents racially/ethnically stratified pregnancy, fertility and abortion data for teens. Some racially stratified rates were too unstable for comparison.

- In Pasquotank County the pregnancy and fertility rates for African American non-Hispanic teens were higher than the comparable rates for white non-Hispanic teens.

Table 103. Pregnancy, Fertility and Abortion Rates, Ages 15-19, Stratified by Race/Ethnicity (2010 and 2011)

Location	Females Ages 15-19					
	2010			2011		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Pasquotank County Total	42.3	29.7	12.6	41.3	22.7	13.5
White, Non-Hispanic	42.2	29.1	**13.1**	30.9	23.1	**7.7**
African American, Non-Hispanic	44.2	32.2	11.9	48.6	31.6	17.0
Other, Non-Hispanic	**58.8**	**0.0**	**58.8**	**0.0**	**0.0**	**0.0**
Hispanic	**0.0**	**0.0**	**0.0**	**75.5**	**37.7**	**37.7**
Regional Average Total	47.7	37.9	11.4	41.5	30.7	9.7
White, Non-Hispanic	44.6	34.3	9.7	29.2	21.6	7.6
African American, Non-Hispanic	60.8	44.0	16.4	51.1	38.0	12.8
Other, Non-Hispanic	8.4	0.0	8.4	20.4	20.4	0.0
Hispanic	0.0	0.0	0.0	55.2	49.8	5.4
Scotland County Total	82.0	73.9	8.1	82.5	69.8	12.8
White, Non-Hispanic	57.9	56.0	**1.9**	53.3	47.3	**5.9**
African American, Non-Hispanic	92.0	77.2	**14.8**	110.4	87.7	22.7
Other, Non-Hispanic	115.6	110.6	**5.0**	81.5	81.5	**0.0**
Hispanic	**71.4**	**71.4**	**0.0**	**0.0**	**0.0**	**0.0**
State of NC Total	49.7	38.3	11.0	43.8	34.8	8.7
White, Non-Hispanic	34.4	27.2	7.0	30.8	25.2	5.5
African American, Non-Hispanic	70.2	50.9	18.7	61.6	45.5	15.6
Other, Non-Hispanic	48.9	38.8	9.5	39.4	32.9	6.4
Hispanic	82.7	70.6	11.7	71.1	62.7	8.2

Note: Bold type indicates an unstable rate based on a small number (fewer than 10 cases).
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age; http://www.schs.state.nc.us/SCHS/data/databook/.

Pregnancies among Teens (age 15-19) and Adolescents (under age 15)

Figure 104 presents trend data on the number of teen pregnancies in each jurisdiction from 2003-2011.

Table 104. Number of Teen Pregnancies (Ages 15-19)
(Single Years, 2003-2011)

Location	Number of Pregnancies, Ages 15-19								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	80	88	135	118	101	83	92	67	64
Regional Average	36	38	47	46	43	37	38	31	28
Scotland County	120	100	112	110	132	123	115	111	110
State of NC	17,390	18,143	18,259	19,192	19,615	19,398	18,142	15,957	13,909

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. Year: 2003-2011. (Counties and age groups as indicated); http://www.schs.state.nc.us/SCHS/data/preg/preg.cfm.

Figure 105 presents trend data on the number of adolescent pregnancies in each jurisdiction from 2003-2011.

Table 105. Number of Adolescent Pregnancies (Under Age 15)
(Single Years, 2003-2011)

Location	Number of Pregnancies, Age 14 and Younger								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	3	3	2	2	1	1	2	3	0
Scotland County	3	5	2	3	7	3	0	3	2
State of NC	443	472	468	405	404	376	324	282	255

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. Year: 2003-2011. (Counties and age groups as indicated); http://www.schs.state.nc.us/SCHS/data/preg/preg.cfm.

Pregnancy Risk Factors

High Parity and Short Interval Births

According to the NC SCHS, a birth is *high parity* if the mother is younger than 18 when she has had one or more births, or aged 18 or 19 and has had two or more births, or is 20-24 and has had four or more births, etc. A *short-interval birth* involves a pregnancy occurring less than six months since the last birth. High-parity and short-interval pregnancies can be a physical strain on the mother and sometimes contribute to complicated pregnancies and/or poor birth outcomes.

Table 106 presents data on high-parity and short interval births for the period 2007-2011.

- The percentages of high-parity births among women under age 30, and age 30 or older in Pasquotank County were higher than the comparable averages for the region and the state.
- Among the comparators, the percentage of short-interval births was lowest in Pasquotank County.

Table 106. High Parity and Short Interval Births
(Single Five-Year Aggregate Period, 2007-2011)

Location	High Parity Births				Short Interval Births	
	Mothers < 30		Mothers ≥ 30			
	No.[1]	%[2]	No.[1]	%[2]	No.[3]	%[4]
Pasquotank County	351	17.8	153	21.3	201	11.5
Regional Average	138	16.7	59	19.5	89	12.6
Scotland County	574	27.9	122	25.6	259	14.9
State of NC	70,404	17.2	47,110	21.2	52,600	12.6
Source:	a	a	a	a	b	b

[1] Number at risk due high parity
[2] Percent of all births with age of mother in category indicated
[3] Number with interval from last delivery to conception of six months or less
[4] Percent of all births excluding 1st pregnancies
a - NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Pregnancy and Births, 2007-2011 Number At Risk NC Live Births due to High Parity by County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.
b - NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Pregnancy and Births, 2007-2011 NC Live Births by County of Residence, Number with Interval from Last Delivery to Conception of Six Months or Less; http://www.schs.state.nc.us/SCHS/data/databook/.

Smoking during Pregnancy

Smoking during pregnancy is an unhealthy behavior that may have negative effects on both the mother and the fetus. Smoking can lead to fetal and newborn death, and contribute to low birth weight and pre-term delivery. In pregnant women, smoking can increase the rate of placental problems, and contribute to premature rupture of membranes and heavy bleeding during delivery (56).

Table 107 presents trend data on smoking during pregnancy for the aggregate periods from 2001-2005 through 2005-2009.

- The percent of births to mothers who smoked during pregnancy was lowest in Pasquotank County in every aggregate period cited.
- Over the period cited the percentages of mothers who smoked during their pregnancies rose overall in Scotland County and the ARHS region and fell overall in Pasquotank County and NC.

Table 107. Smoking during Pregnancy Trend
(Five-Year Aggregate Periods, 2001-2005 through 2005-2009)

Location	Number and Percent of Births to Mothers Who Smoked Prenatally									
	2001-2005		2002-2006		2003-2007		2004-2008		2005-2009	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pasquotank County	270	10.7	277	10.6	284	10.4	295	10.6	284	10.2
Regional Average	127	12.4	130	12.3	136	12.6	136	12.3	135	12.5
Scotland County	477	19.9	523	21.0	522	20.4	549	21.2	550	21.1
State of NC	76,712	12.9	74,901	12.4	73,887	11.9	72,513	11.5	70,529	11.0

Source: NC State Center for Health Statistics, Vital Statistics, Volume 1 (2005, 2006, 2007,-2008, 2009, 2010, and 2011): Population, Births, Deaths, Marriages, Divorces, (geography as noted), Mother Smoked; http://www.schs.state.nc.us/schs/data/vitalstats.cfm.

Early Prenatal Care

Good pre-conception health and early prenatal care can help assure women the healthiest pregnancies possible.

Table 108 presents trend data on the percent of all women receiving prenatal care in the first trimester for the four jurisdictions included in this report.

- The percent of all pregnant women in Pasquotank County who received early prenatal care averaged approximately 80% over the period cited, lower than the state average for the period (83%) and lower than the regional average (85%).
- The percentage of pregnant black women in Pasquotank County who received early prenatal care averaged approximately 72% over the period cited, lower than the comparable average for black women region-wide (78%) and statewide (75%).

Table 108. Women Receiving Prenatal Care in the First Trimester (Five-Year Aggregate Periods, 2001-2005 through 2005-2009)

Location	Percent of Women Receiving Prenatal Care in the First Trimester														
	2001-2005			2002-2006			2003-2007			2004-2008			2005-2009		
	Total	Black	Nat. Amer	Total	Black	Nat. Amer	Total	Black	Nat. Amer	Total	Black	Nat. Amer	Total	Black	Nat. Amer
Pasquotank County	79.4	71.3	0.0	79.6	72.0	50.0	79.6	71.9	75.0	80.2	71.9	83.3	80.6	72.2	83.3
Regional Average	85.4	76.6	42.9	85.2	78.1	60.0	85.6	78.2	67.9	85.2	77.8	69.0	85.1	77.1	54.8
Scotland County	78.0	69.9	78.2	79.0	72.5	79.5	78.0	70.8	80.3	77.4	71.1	80.3	77.5	71.4	80.8
State of NC	83.5	75.5	79.6	83.0	75.4	79.3	82.5	75.2	78.5	82.1	75.0	77.7	82.1	75.2	77.1

Source: NC State Center for Health Statistics, Basic Automated Birth Yearbook (BABY Book), North Carolina Residents (2005, 2006, 2007,-2008, 2009, 2010, and 2011) (geographies as noted): Table 6 (and others): County Resident Births by Month Prenatal Care Began, All Women; http://www.schs.state.nc.us/schs/births/babybook/ .

Pregnancy Outcomes

Low Birth Weight and Very Low Birth Weight

Low birth weight can result in serious health problems in newborns (e.g., respiratory distress, bleeding in the brain, and heart, intestinal and eye problems), and cause lasting disabilities (mental retardation, cerebral palsy, and vision and hearing loss) or even death (57).

Table 109 presents five-year aggregate data on low birth weight births: infants weighing 2,500 grams (5.5 pounds) or less.

- The highest percentages of low birth-weight births among all racial groups in the comparator jurisdictions were, but for one exception, noted in Scotland County.
- In Pasquotank County the percent of low birth-weights among African American non-Hispanic women was 66%-69% higher than the comparable percentage among white non-Hispanic women.
- Note that several of the racially/ethnically stratified percentages shown in the table were based on small numbers of events and should be considered unstable. In NC as a whole, where the percentages were based on larger numbers, black non-Hispanic women had the highest percentage of low birth-weight births.

Table 109. Low Birth-Weight Births
(Five Year Aggregate Periods, 2006-2010 and 2007-2011)

Location	Percent of Low Birth Weight (≤ 2,500 Gram) Births									
	2006-2010					2007-2011				
	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Pasquotank County	10.8	8.8	14.6	**10.5**	**5.3**	10.4	8.4	14.2	**8.6**	**4.6**
Regional Average	10.3	7.7	14.8	7.3	7.7	9.9	7.5	14.1	6.2	9.3
Scotland County	12.9	8.7	16.2	12.6	**15.6**	13.3	10.2	16.1	12.2	**11.1**
State of NC	9.1	7.7	14.4	9.3	6.3	9.1	7.7	14.3	9.4	6.5

Note: Bold type indicates an unstable rate based on a small number (fewer than 20 cases).
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2012, 2013), Pregnancy and Births, Low and Very Low Weight Births; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 110 presents five-year aggregate data on very low birth-weight births: infants weighing 1,500 grams (3.3 pounds) or less.

- The total percentage of very low birth-weight births in Pasquotank County was the second-highest among the four comparator jurisdictions in both periods cited.
- In both counties several of the percentages of very low birth-weight births among minority groups were based on small numbers of events and thus were unstable. At the state level, black non-Hispanic women had higher percentages of very low birth-weight births than women in other minority groups.

Table 110. Very Low Birth-Weight Births
(Five-Year Aggregate Periods, 2006-2010 and 2007-2011)

Location	Percent of Very Low Birth Weight (≤ 1,500 Gram) Births									
	2006-2010					2007-2011				
	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White, Non-Hispanic	Black, Non-Hispanic	Other Non-Hispanic	Hispanic
Pasquotank County	2.4	1.5	3.8	**3.5**	**1.5**	2.1	**1.0**	3.7	**1.7**	**1.5**
Regional Average	2.4	1.6	4.2	1.3	3.9	2.1	1.3	3.9	0.9	4.5
Scotland County	2.6	**1.6**	**3.2**	**3.5**	**0.0**	2.4	**1.4**	2.9	**3.4**	**0.0**
State of NC	1.8	1.3	3.4	1.5	1.2	1.8	1.3	3.3	1.5	1.2

Note: Bold type indicates an unstable rate based on a small number (fewer than 20 cases).
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2012, 2013), Pregnancy and Births, Low and Very Low Weight Births; http://www.schs.state.nc.us/SCHS/data/databook/.

Cesarean Section Delivery

Table 111 presents data on the percent of births delivered by Cesarean section.

- As elsewhere in the US, the percentage of Cesarean section delivery in all four jurisdictions has risen over time. Over the period cited in the table, Cesarean deliveries rose by 7% in Pasquotank County, 13% in the ARHS region, 9% in Scotland County, and 13% statewide.

Table 111. Cesarean Section Deliveries
(Five-Year Aggregate Periods, 2001-2005 through 2007-2011)

Location	Percent of Resident Births Delivered by Cesarean Section						
	2001-2005	2002-2006	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011
Pasquotank County	29.6	31.1	31.0	31.4	31.7	32.0	31.8
Regional Average	28.6	29.5	30.3	30.8	31.3	31.8	32.2
Scotland County	32.0	33.1	34.6	34.7	35.0	34.2	34.8
State of NC	27.7	28.7	29.6	30.3	30.9	31.2	31.2

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Pregnancy and Births, Births Delivered by Caesarian Section; http://www.schs.state.nc.us/SCHS/data/databook/ .

Birth Complications

Data on inpatient hospitalizations from the hospitals in the region speaks to the frequency of problems connected with Pasquotank County infants upon birth. Table 112 summarizes some of that data for 2012. Note that there were no births reported for Vidant Bertie Hospital.

- Of 363 hospitalizations associated with infants born to Pasquotank County resident mothers in 2012, 288 (79%) involved “normal” infants. An additional two births (0.6%) involved infants that presented with “major” problems, and 73 (20%) involved infants that presented with “significant” problems.

Table 112. Discharges of Newborn Infants, Pasquotank County Resident Mothers (2012)

DRG Code	Diagnosis	Number of Discharges, by Hospital		
		Vidant Chowan Hospital	Vidant Roanoke-Chowan Hospital	Albemarle Health
795	Normal newborn	7	2	279
793	Full-term neonate with major problems	0	0	2
794	Neonate with other significant problems	0	0	73

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital, and Albemarle Health.

Infant Mortality

Infant mortality is the number of infant (under one year of age) deaths per 1,000 live births.

Table 113 presents infant mortality data for Pasquotank County, the ARHS region, Scotland County and the state of NC.

- Due to infant deaths numbering fewer than 20 per aggregate period in Pasquotank County in several aggregate periods, stable rates for comparison are limited. The four stable rates for Pasquotank County (8.3 in 2004-2008, 10.0 in 2005-2009, 10.8 in 2006-2010, and 11.1 in 2007-2011) indicated an unfortunate upward trend.
- In the last three periods cited, the infant mortality rate in Pasquotank County exceeded the comparable rates for Scotland County and NC as a whole. While the infant mortality rate in Pasquotank County also was higher than the regional rate in the last two periods, the average rate for the region included several unstable rates and likely was itself unstable.

Table 113. Total Infant Deaths
(Five-Year Aggregate Periods, 2001-2005 through 2007-2011)

Location	Infant Deaths													
	2001-2005		2002-2006		2003-2007		2004-2008		2005-2009		2006-2010		2007-2011	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Pasquotank County	**19**	**7.6**	**19**	**7.3**	**19**	**7.0**	23	8.3	28	10.0	30	10.8	30	11.1
Regional Average	**10**	**9.4**	**10**	**9.2**	**11**	**10.1**	**13**	**11.3**	**14**	**11.8**	**13**	**11.9**	**13**	**11.4**
Scotland County	34	14.2	28	11.2	30	11.7	31	12.0	24	**9.2**	23	8.8	28	11.0
State of NC	5,056	8.5	5,084	8.4	5,234	8.4	5,333	8.4	5,289	8.3	5,066	7.9	4,899	7.8

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Mortality, Infant Death Rates per 1,000 Live Births; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 114 demonstrates that when stratified by race/ethnicity, infant mortality rates in the local jurisdictions under study all were unstable due to small numbers of infant deaths. State data, however, indicated that the infant mortality rate among African-American non-Hispanics exceeded comparable rate for White non-Hispanics by a factor of 2.5.

Table 114. Infant Deaths, Stratified by Race/Ethnicity
(Five-Year Aggregate Periods, 2006-2010 and 2007-2011)

Location		Infant Deaths			
		2006-2010		2007-2011	
		No.	Rate	No.	Rate
Pasquotank County	Total	30	10.8	30	11.1
	White, Non-Hispanic	**11**	**7.7**	**10**	**7.1**
	African American, Non-Hispanic	**19**	**17.6**	20	19.4
	Other, Non-Hispanic	**0**	**0.0**	**0**	**0.0**
	Hispanic	**0**	**0.0**	**0**	**0.0**
Regional Average	*Total*	**13**	**11.9**	**13**	**11.4**
	White, Non-Hispanic	**5**	**8.0**	**5**	**7.5**
	African American, Non-Hispanic	**7**	**18.3**	**7**	**18.1**
	Other, Non-Hispanic	**0**	**7.5**	**0**	**0.0**
	Hispanic	**1**	**33.9**	**1**	**20.6**
Scotland County	Total	23	8.8	28	11.0
	White, Non-Hispanic	**10**	**10.4**	**12**	**13.1**
	African American, Non-Hispanic	**12**	**10.0**	**15**	**12.9**
	Other, Non-Hispanic	**0**	**0.0**	**0**	**0.0**
	Hispanic	**1**	**31.3**	**1**	**27.8**
State of NC	Total	5,066	7.9	4,899	7.8
	White, Non-Hispanic	2,074	5.9	2,001	5.7
	African American, Non-Hispanic	2,208	14.7	2,129	14.3
	Other, Non-Hispanic	187	6.3	188	6.2
	Hispanic	597	5.8	581	5.8

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Mortality, Infant Death Rates per 1,000 Live Births; http://www.schs.state.nc.us/SCHS/data/databook/.

LIFE EXPECTANCY

Life expectancy is the average number of additional years that someone at a given age would be expected to live if he/she were to experience throughout life the age-specific death rates observed in a specified reference period. Life expectancies in terms of years of life remaining can be calculated for any age. Because life expectancy is an average, however, a particular person may well die many years before or many years after their "expected" survival, due to life experiences, environment, and personal genetic characteristics.

Life expectancy from birth is a frequently utilized and analyzed component of demographic data. It represents the average life span of a newborn and is considered an indicator of the overall health of a population or community.

Life expectancy rose rapidly in the twentieth century due to improvements in public health, nutrition and medicine, and continued progress in these areas can be expected to have further positive impact on life expectancy in the future. Decreases in life expectancy are also possible, influenced mostly by epidemic disease (e.g. plagues of history and AIDS in the modern era), and natural and man-made disasters. One of the most significant influences on life expectancy in populations is infant mortality, since life expectancy at birth is highly sensitive to the rate of death in the first few years of life.

Table 115 presents gender- and race-stratified life expectancy at birth data for all jurisdictions.

- Overall life expectancy at birth in Pasquotank County increased by 3.3 years, from 74.1 to 77.4 (4%), between 1990-1992 and 2008-2010.
- In both periods cited Pasquotank County life expectancy at birth for females was higher than life expectancy for males, but the gap narrowed from 8.8 years to 5.6 years because life expectancy increased by 1.7 years for females and by 4.9 years for males.
- In Pasquotank County in 1990-1992 the life expectancy for whites exceeded the life expectancy for African-Americans by 3.7 years; in the 2008-2010 period the difference was 3.1 years.
- Of the jurisdictions being compared, overall life expectancies at birth were second-highest in Pasquotank County in both periods cited.

Table 115. Life Expectancy at Birth, by Gender and Race (1990-1992 and 2008-2010)

Location	Life Expectancy in Years									
	Person Born in 1990-1992					Person Born in 2008-2010				
	Overall	Male	Female	White	African-American	Overall	Male	Female	White	African-American
Pasquotank County	74.1	69.6	78.4	75.5	71.8	77.4	74.5	80.1	78.4	75.3
Regional Average	73.7	69.8	77.7	75.1	70.3	77.1	73.7	80.5	78.1	74.9
Scotland County	72.5	68.5	76.0	74.9	69.7	73.9	70.1	77.5	74.7	72.3
State of NC	74.9	71.0	78.7	76.4	69.8	77.8	75.1	80.4	78.5	74.8

Source: NC State Center for Health Statistics, County-level Data, Life Expectancy, State and County Estimates, Life Expectancy: North Carolina 1990-1992 and 2008-2010, State and County; http://www.schs.state.nc.us/schs/data/lifexpectancy/.

MORTALITY

Leading Causes of Death

This section describes mortality for the 15 leading causes of death, as well as mortality due to major site-specific cancers. The list of topics and the accompanying data was retrieved from the NC SCHS *County Health Databook*. Unless otherwise noted, the numerical data are age-adjusted and represent five-year aggregate periods.

Table 116 compares mortality rates for the 15 leading causes of death in Pasquotank County, the ARHS region, Scotland County, NC and the US for the five-year aggregate period 2007-2011 (or as otherwise noted). The causes of death are listed in descending order of rank in Pasquotank County. Note that the NC SCHS suppressed rates for some causes of death in each county (denoted by "N/A") because the number of deaths fell below the Center's threshold of 20 per five-year aggregate period. For that reason, discussion of some county-level differences will be limited.

Differences between Pasquotank County and NC mortality rates are discussed below.

Relative to the **state of NC**:

- The overall mortality rate in Pasquotank County (830.3) was 3% *higher* than the overall state mortality rate (808.4).
- The first two leading causes of death in Pasquotank were heart disease and total cancer, in that order; statewide the first two were total cancer and heart disease, in that order. The heart disease mortality rate in Pasquotank County was14% *higher* than the state rate, and the total cancer mortality rate in Pasquotank County was11% *higher* than the state rate.
- Cerebrovascular ranked *higher* as a leading cause of death in Pasquotank County (3rd vs. 4th). The mortality rate for cerebrovascular disease in Pasquotank County was 49.1, 7% *higher* than the comparable state rate of 46.0.
- Chronic lower respiratory disease ranked *lower* as a leading cause of death in Pasquotank County (4th vs. 3rd). The mortality rate for chronic lower respiratory disease in Pasquotank County was 44.4, 5% *lower* than the state rate of 46.6.
- Mortality due to all other unintentional injury (i.e., non-motor vehicle injuries) ranked the *same* (5th) as a leading cause of death. The all other unintentional injury mortality rate in Pasquotank County was 29.0, 0.7% *lower* than the comparable state rate (29.2).
- Alzheimer's disease ranked the *same* (6th) as a leading cause of death. The mortality rate for Alzheimer's disease in Pasquotank County was 27.4, 6% *lower* than the state rate of 29.0.
- Pneumonia/influenza ranked *higher* as a leading cause of death in Pasquotank County (7th vs. 9th). The pneumonia/influenza mortality rate in Pasquotank County was 23.0, 28% *higher* than the state rate of 17.9.
- Diabetes ranked lower as a leading cause of death in Pasquotank County (8th vs. 7th). The diabetes mortality rate in Pasquotank County was 18.9, 14% *lower* than the state rate of 22.0.
- Nephritis, nephrotic syndrome and nephrosis (i.e., kidney disease) ranked *lower* as a leading cause of death in Pasquotank County (9th vs. 8th). The kidney disease mortality rate in Pasquotank County was 16.6, 11% *lower* than the state rate of 18.6.

- Mortality due to unintentional motor vehicle injury ranked the *same* (10th) as a leading cause of death in Pasquotank County. The unintentional motor vehicle injury mortality rate in Pasquotank County was 10.6, 32% *lower* than the state rate of 15.5.
- Mortality due to septicemia ranked the *same* (11th). The septicemia mortality rate in Pasquotank County was 9.7, 29% lower than the state rate of 13.6.

Due to below-threshold numbers of deaths in the remaining four categories of mortality in Pasquotank County, NC SCHS suppressed the associated county mortality rates.

Table 116. Overall Age-Adjusted Mortality Rates for the 15 Leading Causes of Death, Pasquotank County and Comparators (Single Five-Year Aggregate Period, 2007-2011 or as Noted)[1]

Cause of Death	Pasquotank County			*Regional Average*			Scotland County			State of NC			United States (2011)	
	Number	Rate	Rank	Number	Rate	Rank	Number	Rate	Rank	Number	Rate	Rank	Rate	Rank
Diseases of the Heart	464	204.3	1	*220*	*188.9*	*2*	459	234.5	1	86,099	179.3	2	173.7	1
Total Cancer	451	199.8	2	*228*	*195.3*	*1*	429	217.4	2	88,518	179.7	1	168.6	2
Cerebrovascular Disease	110	49.1	3	*51*	*43.7*	*4*	113	59.1	3	21,774	46.0	4	37.9	5
Chronic Lower Respiratory Disease	100	44.4	4	*51*	*46.1*	*3*	91	47.3	4	22,274	46.6	3	42.7	3
All Other Unintentional Injuries	63	29.0	5	*31*	*31.2*	*6*	53	29.2	6	13,781	29.2	5	38.0	4
Alzheimer's Disease	64	27.4	6	*30*	*26.9*	*8*	36	19.2	11	13,347	29.0	6	24.6	6
Pneumonia and Influenza	53	23.0	7	*30*	*14.0*	*11*	26	13.1	13	8,455	17.9	9	15.7	8
Diabetes Mellitus	42	18.9	8	*31*	*37.8*	*5*	77	38.8	5	10,733	22.0	7	21.5	7
Nephritis, Nephrotic Syndrome, and Nephrosis	39	16.6	9	*19*	*19.8*	*9*	48	24.3	7	8,860	18.6	8	13.4	9
Unintentional Motor Vehicle Injuries	23	10.6	10	*20*	*27.9*	*7*	36	20.7	10	7,336	15.5	10	10.9	11
Septicemia	22	9.7	11	*14*	*9.7*	*12*	43	23.3	9	6,515	13.6	11	10.5	12
Chronic Liver Disease and Cirrhosis	19	N/A	N/A	*11*	*N/A*	*N/A*	30	15.3	12	4,723	9.3	13	9.7	13
Suicide	16	N/A	N/A	*10*	*17.4*	*10*	10	N/A	N/A	5,751	12.1	12	12.0	10
Acquired Immune Deficiency Syndrome	9	N/A	N/A	*4*	*N/A*	*N/A*	10	N/A	N/A	1,687	3.5	15	2.4	15
Homicide	8	N/A	N/A	*4*	*N/A*	*N/A*	41	23.6	8	2,949	6.3	14	3.6	14
Total Deaths All Causes (Some causes are not listed above)	1,876	830.3	N/A	*949*	*840.1*	*N/A*	1,915	994.2	N/A	388,092	808.4	N/A	740.6	N/A
Source:	a	a	b	b	b	b	a	a	b	a	a	b	c	b

[1] Rate = Number of events per 100,000 population, where the Standard = Year 2000 US Population

Sources:

a - NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

b - Calculated

c - National Center for Health Statistics, National Vital Statistics Reports, Volume 61, Number 6 (October 10, 2012), Deaths, Preliminary data for 2011; http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_06.pdf.

Compared to the average mortality rates for the seven counties in the ARHS region, mortality rates in Pasquotank County were *higher* for:

- Diseases of the heart
- Total cancer
- Cerebrovascular disease
- Alzheimer's disease
- Pneumonia and influenza

The overall mortality rate in Pasquotank County (830.3) was 1% lower than the regional average overall rate (840.1).

Compared to US mortality rates, mortality rates in Pasquotank County were *higher* for:

- Diseases of the heart
- Total cancer
- Cerebrovascular disease
- Chronic lower respiratory disease
- Alzheimer's disease
- Pneumonia and influenza
- Nephritis, nephrotic syndrome, nephrosis

The overall mortality rate in Pasquotank County (830.3) was 12% higher than the overall US mortality rate (740.6).

Gender Disparities in Leading Causes of Death

In the past, NC CHAs have demonstrated some significant differences in mortality rates between men and women. Table 117 compares gender stratified rates for the 15 leading causes of death in Pasquotank County and its comparator jurisdictions. The usefulness of the table is hampered somewhat by numerous suppressed rates.

In Pasquotank County, mortality *rates for males were higher* than comparable rates for females for:

- All other unintentional injuries (by 111%
- Chronic lower respiratory disease (by 93%)
- Diseases of the heart (by 78%)
- Total cancer (by 41%)
- Cerebrovascular disease (by 24%), and
- Pneumonia and influenza (by 18%)

In Pasquotank County, the overall mortality rate for males (1,026.0) was 47% higher than the overall mortality rate for females (698.5).

In NC as a whole, mortality rates for males were higher than comparable rates for females for every leading cause of death except Alzheimer's disease, and the overall mortality rate for males (969.2) was 42% higher than the overall mortality rate for females (684.0).

Table 117. Sex-Specific Age-Adjusted Death Rates for the 15 Leading Causes of Death (Single Five-Year Aggregate Period, 2007-2011)

Cause of Death	Pasquotank County				Scotland County Rate		Regional Average Rate		State of NC Rate	
	Males		Females							
	Number	Rate	Number	Rate	Males	Females	Males	Females	Males	Females
1. Diseases of the Heart	242	272.2	222	152.9	323.4	174.7	256.2	136.6	229.4	141.6
2. Cancer	224	246.3	227	174.5	294.1	176.3	245.5	161.1	227.4	147.5
3. Cerebrovascular Diseases	47	55.7	63	44.8	65.6	52.6	64.2	40.5	46.8	44.5
4. Chronic Lower Respiratory Disease	54	64.6	46	33.5	64.5	37.5	73.4	35.4	54.9	41.7
5. All Other Unintentional Injuries	39	41.7	24	19.8	47.3	N/A	46.7	19.8	38.8	20.9
6. Alzheimer's Disease	17	N/A	47	29.6	N/A	24.9	N/A	N/A	22.7	32.2
7. Pneumonia and Influenza	21	24.2	32	20.5	N/A	N/A	56.7	47.9	20.9	16.1
8. Diabetes Mellitus	15	N/A	27	20.0	36.8	40.6	61.1	36.0	26.0	18.8
9. Nephritis, Nephrotic Syndrome and Nephrosis	12	N/A	27	17.9	25.8	22.1	N/A	N/A	22.7	16.0
10. Unintentional Motor Vehicle Injuries	18	N/A	5	N/A	30.4	N/A	**54.2**	**N/A**	22.9	8.6
11. Septicemia	9	N/A	13	N/A	N/A	21.2	**N/A**	**N/A**	15.0	12.6
12. Chronic Liver Disease and Cirrhosis	10	N/A	9	N/A	N/A	N/A	**N/A**	**N/A**	13.2	5.9
13. Suicide	9	N/A	7	N/A	N/A	N/A	**N/A**	**N/A**	19.6	5.3
14. Acquired Immune Deficiency Syndrome	6	N/A	3	N/A	N/A	N/A	**N/A**	**N/A**	4.8	2.3
15. Homicide	4	N/A	4	N/A	39.9	N/A	**N/A**	**N/A**	9.8	2.9
Total Deaths All Causes (Some causes are not listed above)	913	1,026.0	963	698.5	1,238.3	815.4	**1,042.0**	**717.7**	969.2	684

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source - NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Racial Disparities in Leading Causes of Death

Because of below-threshold numbers of deaths during the period, 2007-2011, age-adjusted racially-stratified mortality rates for Pasquotank County are available only for white and African American non-Hispanics, and for only some causes of death.

According to data in Table 118, in Pasquotank County the overall mortality rate for African American non-Hispanics (902.6) was 11% higher than the overall mortality rate for white non-Hispanics (810.2). Racial differences in mortality will be described in detail as each cause of death is discussed separately in subsequent sections of this report.

Table 118. Race-Specific Age-Adjusted Death Rates for the 15 Leading Causes of Death (Single Five-Year Aggregate Period, 2007-2011)

Cause of Death	Pasquotank County									
	White, non-Hispanic		African-American, non-Hispanic		Other Races, non-Hispanic		Hispanic		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1. Diseases of the Heart	296	193.5	164	231.8	4	N/A	0	N/A	464	204.3
2. Cancer	290	194.5	159	222.1	0	N/A	2	N/A	451	199.8
3. Cerebrovascular Diseases	60	39.6	50	72.1	0	N/A	0	N/A	110	49.1
4. Chronic Lower Respiratory Disease	85	56.1	15	N/A	0	N/A	0	N/A	100	44.4
5. All Other Unintentional Injuries	47	34.7	14	N/A	1	N/A	1	N/A	63	29.0
6. Alzheimer's Disease	43	27.1	20	28.1	0	N/A	1	N/A	64	27.4
7. Pneumonia and Influenza	34	21.7	18	N/A	0	N/A	1	N/A	53	23.0
8. Diabetes Mellitus	21	14.1	21	30.5	0	N/A	0	N/A	42	18.9
9. Nephritis, Nephrotic Syndrome and Nephrosis	20	12.6	17	N/A	1	N/A	1	N/A	39	16.6
10. Unintentional Motor Vehicle Injuries	14	N/A	8	N/A	0	N/A	1	N/A	23	10.6
11. Septicemia	19	N/A	3	N/A	0	N/A	0	N/A	22	9.7
12. Chronic Liver Disease and Cirrhosis	15	N/A	4	N/A	0	N/A	0	N/A	19	N/A
13. Suicide	14	N/A	1	N/A	0	N/A	1	N/A	16	N/A
14. Acquired Immune Deficiency Syndrome	2	N/A	7	N/A	0	N/A	0	N/A	9	N/A
15. Homicide	3	N/A	5	N/A	0	N/A	0	N/A	8	N/A
Total Deaths All Causes (Some causes are not listed above)	1,215	810.2	646	902.6	6	N/A	9	N/A	1876	830.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source - NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Age Disparities in Leading Causes of Death

Each age group tends to have its own leading causes of death. Table 119 lists the three leading causes of death by age group for the five-year aggregate period from 2007-2011. (Note that for this purpose it is important to use *non-age adjusted* death rates.)

The leading cause(s) of death in each of the age groups in Pasquotank County were:

- Age Group 00-19: Conditions originating in the perinatal period
- Age Group 20-39: Diseases of the heart
- Age Group 40-64: Cancer – all sites
- Age Group 65-84: Cancer – all sites
- Age Group 85+: Diseases of the heart

Noteworthy differences in the age pattern of mortality among the three jurisdictions being compared are as follows:

- SIDS was a more prominent cause of death among the 00-19 age group in Pasquotank County than in the other jurisdictions.
- Homicide was a more prominent cause of death in Scotland County, ranked third in the 00-19 age group and first in the 20-39 age group. Homicide was not listed among the three leading causes of death in any age group in the other jurisdictions.
- Alzheimer's disease was among the three leading causes of death in the 85+ age group in Pasquotank County but was not among the three leading causes of death in any age group in Scotland County or statewide.

Table 119. Three Leading Causes of Death by Age Group, by Unadjusted Death Rates (Single Five-Year Aggregate Period, 2007-2011)

Age Group	Rank	Cause of Death		
		Pasquotank County	Scotland County	State of NC
00-19	1	Conditions originating in the perinatal period	Conditions originating in the perinatal period	Conditions originating in the perinatal period
	2	SIDS	Other unintentional injuries	Congenital anomalies (birth defects)
	3	Other unintentional injuries	Homicide	Motor vehicle injuries
20-39	1	Diseases of the heart	Homicide	Motor vehicle injuries
	2	Other unintentional injuries	Motor vehicle injuries	Other unintentional injuries
	3	Motor vehicle injuries	Cancer-all sites	Suicide
40-64	1	Cancer-all sites	Cancer-all sites	Cancer-all sites
	2	Diseases of the heart	Diseases of the heart	Diseases of the heart
	3	Other unintentional injuries	Cerebrovascular disease	Other unintentional injuries
65-84	1	Cancer-all sites	Cancer-all sites	Cancer-all sites
	2	Diseases of the heart	Diseases of the heart	Diseases of the heart
	3	Chronic lower repiratory disease	Chronic lower respiratory diseases	Chronic lower respiratory diseases
85+	1	Diseases of the heart	Diseases of the heart	Diseases of the heart
	2	Cancer-all sites	Cancer-all sites	Cancer-all sites
	3	Alzheimer's disease	Cerebrovascular disease	Cerebrovascular disease

Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, Death Counts and Crude Death Rates per 100,000 for Leading Causes of Death, by Age Groups, NC, 2007-2011; http://www.schs.state.nc.us/SCHS/data/databook/.

Differences in mortality statistics will be covered as each cause of death is discussed separately below, in the order of highest Pasquotank County rank to lowest, beginning with diseases of the heart. It is important to emphasize once more that because of below-threshold numbers of deaths there will be no stable county rates for some causes of death, especially among racially stratified groups. Some unstable data will be presented in this document, but always accompanied by cautions regarding its use.

Diseases of the Heart

Heart disease is an abnormal organic condition of the heart or of the heart and circulation. Heart disease is the number one killer in the US and a major cause of disability. The most common cause of heart disease, coronary artery disease, is a narrowing or blockage of the coronary arteries, the blood vessels that supply blood to the heart itself. Coronary artery disease is the major reason people have heart attacks, but other kinds of heart problems may originate in the valves in the heart, or the heart may not pump well and cause heart failure (58).

Heart disease was the leading cause of death in Pasquotank County and Scotland County and the second-leading cause of death in the Albemarle Region and the state of NC in the 2007-2011 period (cited previously).

Heart Disease Hospitalizations

Table 120 presents hospital discharge rate trend data for several years. According to this data from NC SCHS, heart disease has been cause for a very high rate of hospitalization in all three jurisdictions. The highest rates were observed in Scotland County.

Table 120. Heart Disease Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	11.7	13.2	12.0	10.6	9.4	8.9	10.3
Regional Average	11.4	11.9	11.1	10.6	9.7	9.7	9.9
Scotland County	20.8	19.8	19.6	19.0	21.4	20.5	19.0
State of NC	13.1	12.7	12.2	11.8	11.4	11.3	10.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS data, in 2011 there were 311 hospital admissions for heart disease among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

Table 121 presents data on 2012 inpatient hospitalizations of Pasquotank County residents in the region's hospitals associated with diagnoses of chronic rheumatic heart disease (ICD-9 Codes 393-398), hypertensive heart disease (ICD-9 Code 402), ischemic heart disease (ICD-9 Codes 410-414), pulmonary heart disease (ICD-9 Codes 415 and 416), and other forms of heart disease (ICD-9 Codes 420-429). Note that while significant, these categories do *not* include all forms of heart disease. There were 384 inpatient hospitalizations of Pasquotank County residents for these categories of heart disease among the four ARHS hospitals in 2012.

Table 121. Inpatient Hospitalizations of Pasquotank County Residents for Diseases of the Heart, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
393-398	Chronic rheumatic heart disease	0	0	0	0
402	Hypertensive heart disease	0	0	0	12
410-414	Ischemic heart disease	0	0	0	112
415-416	Pulmonary heart disease	0	0	0	41
420-429	Other forms of heart disease	0	0	0	219
TOTAL		0	0	0	384

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 122 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with diseases of the heart. The list of diagnoses is the same as the list in the table above and does *not* include all types of heart disease. Pasquotank County residents made a total of 503 visits for these diagnoses over three years, an annual average of more than 168 ED visits.

Table 122. Emergency Department Admissions of Pasquotank County Residents for Diseases of the Heart, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
393-398	Chronic rheumatic heart disease	0	0	0
402	Hypertensive heart disease	0	0	0
410-414	Ischemic heart disease	50	54	41
415-416	Pulmonary heart disease	2	4	4
420-429	Other forms of heart disease	105	110	133
TOTAL		157	168	178

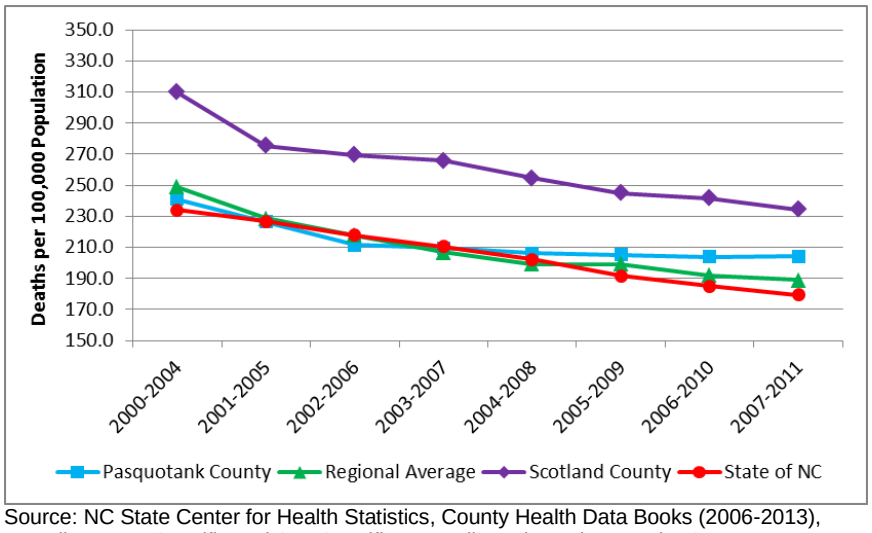
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Heart Disease Mortality Rate Trend

Figure 7 displays the heart disease mortality rate trend over time in the four jurisdictions being compared in this CHA.

- The heart disease mortality rate fell significantly in all four jurisdictions over the period cited.
- Scotland County had the highest heart disease mortality rate in every period cited.
- The heart disease mortality rate for Pasquotank County fell by 15% (from 240.9 to 204.3) between 2000-2004 and 2007-2011.
- At the state level, the heart disease mortality rate fell steadily over the period cited.

Figure 7. Overall Heart Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Heart Disease Mortality

Table 123 presents heart disease mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of heart disease deaths among some minority populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the heart disease mortality rate was lowest statewide and highest in Scotland County.
- Among African American non-Hispanic persons the heart disease mortality rate was highest in Scotland County and second-highest in Pasquotank County; it was lowest statewide.
- There appeared to be a large gender difference in heart disease mortality in all jurisdictions; this disparity will be described in greater detail below.

Table 123. Race/Ethnicity-Specific and Sex-Specific Heart Disease Mortality (Single Five-Year Aggregate Period, 2007-2011)

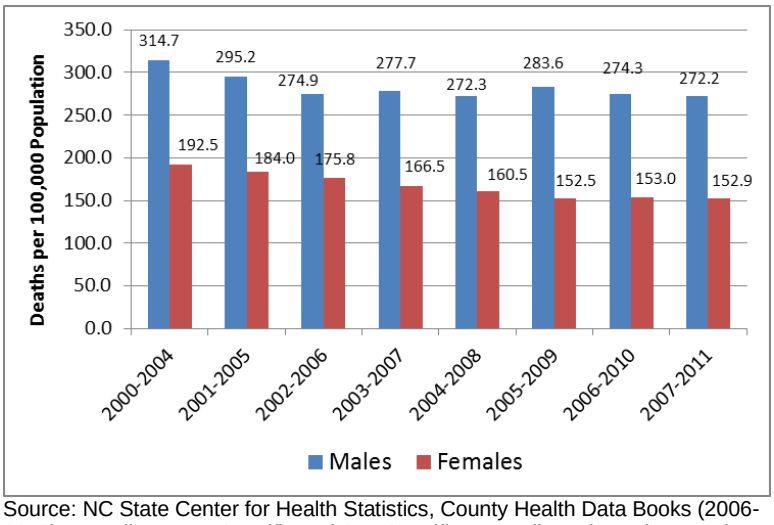
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	296	193.5	164	231.8	4	N/A	0	N/A	242	272.2	222	152.9	464	204.3
Regional Average	148	185.4	71	222.3	1	N/A	0	N/A	122	256.2	97	136.6	220	188.9
Scotland County	276	228.4	146	233.8	37	311.0	0	N/A	245	323.4	214	174.7	459	234.5
State of NC	67,605	176.2	16,965	209.3	1,070	118.6	459	46.1	44,630	229.4	41,469	141.6	86,099	179.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 8 depicts gender-stratified heart disease mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that the gender difference in heart disease mortality noted in Pasquotank County for 2007-2011 is actually longstanding. Noteworthy also is the apparent decrease in heart disease mortality among both men and women since the 2000-2004 period. The decrease among females has been steady; the decrease among males has been more erratic.

Figure 8. Sex-Specific Heart Disease Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 124 presents heart disease mortality rate data stratified by gender and race/ethnicity for the period 2007-2011.

- Because of below-threshold numbers of heart disease deaths in some stratified minority populations the NC SCHS suppressed the related mortality rates.
- In Pasquotank County the heart disease mortality rate among African American, non-Hispanic males was 19% *higher* than the rate among white non-Hispanic males, and the heart disease mortality rate among African American non-Hispanic females was 25% *higher* than the rate among white non-Hispanic females.
- At the regional level, heart disease mortality rates among African American non-Hispanics, both male and female, were higher than comparable rates for white non-Hispanics, with the difference 18% among males and 31% among females.
- At the state level, heart disease mortality rates among African Americans, both male and female, were approximately 20% *higher* than among their white, non-Hispanic counterparts. Heart disease mortality statewide was lowest among both male and female Hispanics.

Table 124. Race/Ethnicity and Sex-Specific Heart Disease Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic
Pasquotank County	259.1	307.2	N/A	N/A	142.6	178.6	N/A	N/A
Regional Average	252.0	296.3	N/A	N/A	136.5	178.0	N/A	N/A
Scotland County	313.4	315.3	465.1	N/A	167.9	187.2	N/A	N/A
State of NC	226.4	271.6	140.0	54.8	137.5	167.5	100.8	37.4

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Cancer

Cancer is a term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells also can spread to other parts of the body through the blood and lymph systems. If the disease remains unchecked, it can result in death (60).

Total Cancer

Total cancer (cancers of all types) was the second leading cause of death in Pasquotank County and Scotland County, and the leading cause of death in the ARHS region and the state of NC in the 2007-2011 period (cited previously).

Malignant Neoplasm Hospitalizations

Table 125 presents the hospital discharge rate trend data for malignant neoplasms.

- The malignant neoplasm discharge rate in Pasquotank County was the lowest among the comparators in 2005, 2006, 2007 and 2009, and second-lowest in 2008, 2010 and 2011. Hospitalizations for this diagnosis have decreased since 2007/2008 in all jurisdictions.

Table 125. All Malignant Neoplasms Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	3.2	3.1	3.3	3.3	2.7	2.7	2.5
Regional Average	3.6	3.4	3.5	2.9	2.9	2.4	2.4
Scotland County	4.6	4.5	4.8	3.7	3.2	3.2	3.5
State of NC	3.9	3.9	3.9	3.6	3.4	3.3	3.2

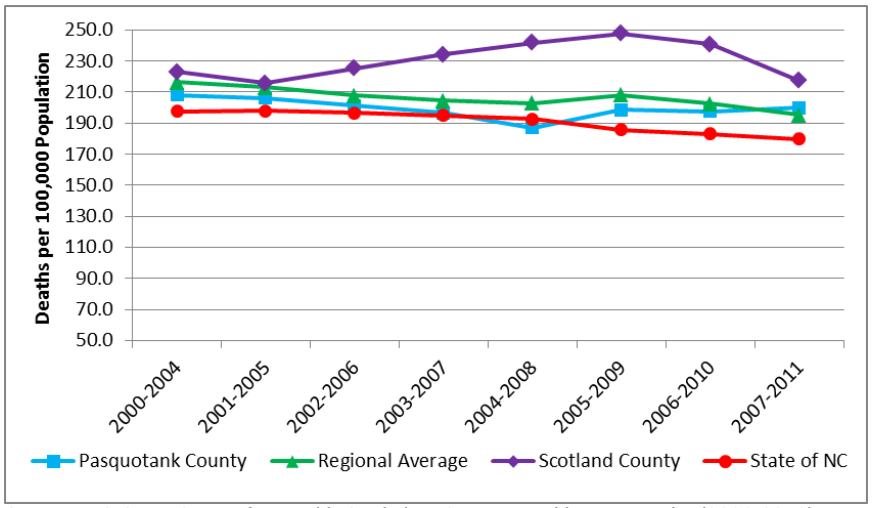
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

Total Cancer Mortality Rate Trend

Figure 9 displays total cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- In every jurisdiction the total cancer mortality rate in 2007-2011 was lower than the rate in 2000-2004.
- The total cancer mortality rate in Pasquotank County fell for several aggregate periods before rising in the last three. The county total cancer mortality rate in 2007-2011 (199.8) was higher than the comparable rates for the region and the state.
- At the state level, the total cancer mortality rate fell gradually over the period cited, to a current low (179.7).

Figure 9. Overall Total Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Total Cancer Mortality

Table 126 presents total cancer mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of total cancer deaths among some minority populations in Pasquotank County and elsewhere, mortality rates for those groups were suppressed.
- In the jurisdictions where total cancer mortality rates for African American non-Hispanics were available they exceeded comparable rates for white non-Hispanics. For example, in Pasquotank County the total cancer mortality rate among African American non-Hispanics was 14% higher than the rate for white non-Hispanics. In Scotland County the rate difference between those two groups was 2%. Region-wide the comparable difference was 22%; statewide the difference was 20%.
- There appeared to be a significant gender difference in total cancer mortality in all jurisdictions; this disparity will be described in greater detail below.

Table 126. Race/Ethnicity-Specific and Sex-Specific Total Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

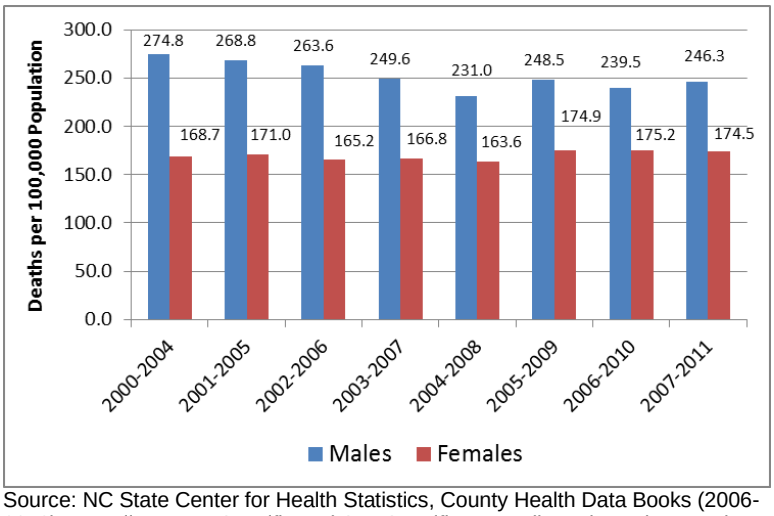
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	290	194.5	159	222.1	0	N/A	2	N/A	224	246.3	227	174.5	451	199.8
Regional Average	152	188.4	75	229.4	0	N/A	1	N/A	121	245.5	107	161.1	228	195.3
Scotland County	260	218.1	141	223.5	27	223.6	1	N/A	225	294.1	204	176.3	429	217.4
State of NC	68,577	176.8	17,982	211.4	1,240	120.7	719	65.1	47,193	227.4	41,325	147.5	88,518	179.7

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 10 depicts gender-stratified total cancer mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that the gender difference in total cancer mortality noted in Pasquotank County for 2007-2011 is actually longstanding.
- The total cancer mortality rate for females changed little over most of the period cited while the comparable rate for males decreased overall.

Figure 10. Sex-Specific Total Cancer Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 127 presents total cancer mortality rate data stratified by gender and race/ethnicity for the period 2007-2011.

- Because of below-threshold numbers of total cancer deaths in some stratified populations the NC SCHS suppressed the related mortality rates.
- In Pasquotank County, the ARHS region and NC the total cancer mortality rates for African American non-Hispanic males exceeded the rate for white non-Hispanic males, and the rates for African American non-Hispanic females exceeded the rates for white non-Hispanic females.
- In Scotland County white non-Hispanic males have a higher total cancer mortality rate than African American non-Hispanic males, but among females the reverse is true.
- Total cancer mortality rates were lowest statewide among both male and female Hispanics.

Table 127. Race/Ethnicity and Sex-Specific Total Cancer Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic
Pasquotank County	233.0	289.2	N/A	N/A	174.3	186.3	N/A	N/A
Regional Average	228.1	307.0	N/A	N/A	160.0	181.0	N/A	N/A
Scotland County	301.8	293.8	N/A	N/A	166.1	195.8	N/A	N/A
State of NC	220.7	293.2	145.7	72.2	146.6	164.0	103.1	59.4

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

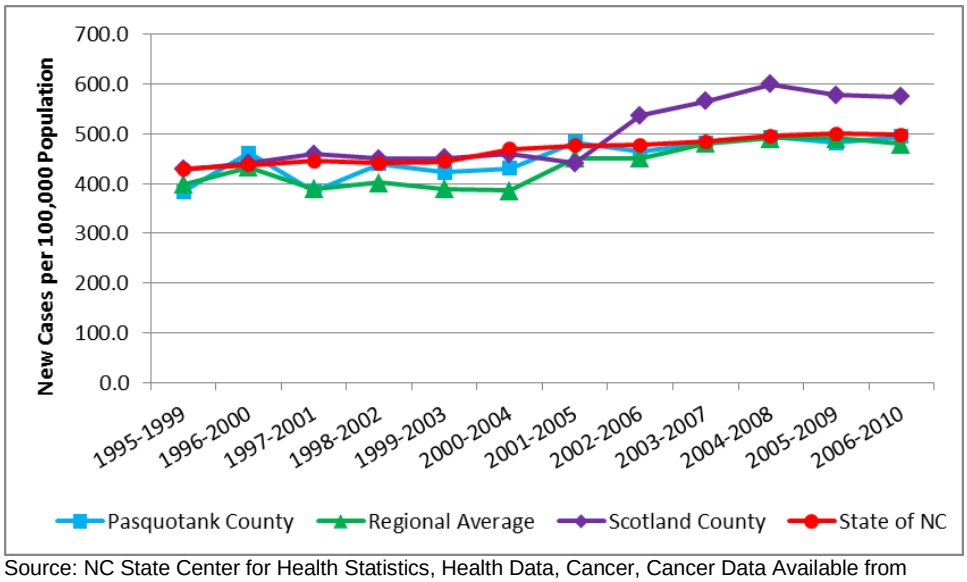
Total Cancer Incidence

Since total cancer is a significant cause of death, it is useful to examine patterns in the development of new cases. The statistic important to understanding the growth of a health problem is *incidence*, the population-based rate at which new cases of a disease occur and are diagnosed (methodology for which was described previously). Cancer incidence rates used in this report were obtained from the NC Cancer Registry, which collects data on newly diagnosed cases from NC clinics and hospitals as well as on NC residents whose cancers were diagnosed at medical facilities in bordering states.

Figure 11 plots the incidence rate trend for total cancer.

- The total cancer incidence rate in Pasquotank County fluctuated over time, but increased 29% in net over the entire period cited, from 383.8 in 1995-1999 to 494.4 in 2006-2010.
- The total cancer incidence rate region-wide increased 20% in net over the same time period, from 398.8 to 479.5.
- The total cancer incidence rate in Scotland County increased 34% over the period cited, from 428.7 to 574.7. This was the largest increase among the four jurisdictions.
- The total cancer incidence rate for the state of NC increased gradually over the period cited, and was 16% higher in 2006-2010 (498.1) than in 1995-1999 (429.4).

Figure 11. Overall Total Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1995-1999 through 2006-2010)



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); http://www.schs.state.us.nc/SCHS/CCR/reports.html.

To this point the discussions of cancer mortality and incidence have focused on figures for total cancer. In Pasquotank County, as throughout the state of NC, there are four (or five) site-specific cancers that cause most cancer deaths: breast cancer, colon cancer, lung cancer, prostate cancer, and, sometimes, pancreas cancer. It should be noted that males also can have breast cancer, but since the number of cases tends to be small, the mortality rates for breast cancer (and prostate cancer) used here are gender-specific.

Table 128 presents age-adjusted *mortality* data for the five major site-specific cancers for the 2007-2011 period.

- In Pasquotank County, lung cancer was the site-specific cancer with the highest mortality rate, followed by breast cancer and prostate cancer.
- In NC as a whole, lung cancer presents the highest mortality rate, followed by prostate cancer, breast cancer, colon cancer, and pancreas cancer in that order.

Table 128. Mortality for Five Major Site-Specific Cancers
(Single Five-Year Aggregate Period, 2007-2011)

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer		Pancreas Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Pasquotank County	35	27.2	22	25.9	151	66.8	35	15.7	24	10.4
Regional Average	14	27.2	13	34.1	72	64.0	21	19.4	13	10.4
Scotland County	17	N/A	17	N/A	141	70.8	48	24.4	28	14.3
State of NC	6,358	22.8	4,385	24.3	27,092	54.5	7,614	15.5	5,184	10.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013). 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates (counties and cancer sites as indicated); http://www.schs.state.nc.us/schs/data/databook/.

Table 129 presents age-adjusted *incidence* data for four of the five site-specific cancers for the 2006-2010 period. (Note that incidence data for pancreas cancer was not available.)

- In Pasquotank County, prostate cancer was the site-specific cancer with the highest incidence rate, followed by breast cancer, lung cancer, and colon cancer. Cancer incidence in Scotland County also followed this pattern.
- Region-wide, breast cancer presented with the highest incidence rate, followed by prostate cancer, lung cancer, and colon cancer. Cancer incidence rates in the state as a whole followed the same pattern as the region.

Table 129. Incidence for Four Major Site-Specific Cancers (Single Five-Year Aggregate Period, 2006-2010)

Location	Female Breast Cancer		Prostate Cancer		Lung Cancer		Colon Cancer	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Pasquotank County	195	163.3	169	175.3	156	69.6	109	50.3
Regional Average	95	167.3	85	159.7	82	70.6	55	48.2
Scotland County	145	134.9	210	235.0	189	96.1	106	55.6
State of NC	41,169	155.9	34,733	153.7	36,287	74.8	20,968	43.4

Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013). 2006-2010 NC Cancer Incidence Rates per 100,000 Population Age-Adjusted to the 2000 US Population; http://www.schs.state.nc.us/schs/data/databook/

Multi-year mortality and incidence rate trends for these site-specific cancers will be presented subsequently, as each cancer type is discussed separately. The cancer topics are presented in decreasing order of site-specific cancer mortality rates in the state of NC: lung cancer, prostate cancer, female breast cancer, colon cancer and pancreas cancer.

Lung Cancer

The category of cancer referred to as lung cancer traditionally *also* includes cancers of the trachea and bronchus.

Lung, Trachea and Bronchus Cancer Hospitalizations

Table130 summarizes hospital discharge rate data for trachea, bronchus and lung neoplasms.

- The hospital discharge rate for lung cancer in Pasquotank County rose steadily over the last three years; the comparable state rate fell over the same period.

Table 130. Malignant Trachea, Bronchus, Lung Neoplasms Hospital Discharge Rate Trend (Single Years, 2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	0.5	0.4	0.6	0.7	0.4	0.5	0.6
Regional Average	0.5	0.5	0.7	0.5	0.4	0.5	0.4
Scotland County	0.5	0.9	0.5	0.8	0.4	0.6	0.7
State of NC	0.6	0.6	0.6	0.5	0.5	0.5	0.4

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, 23 Pasquotank County residents were hospitalized somewhere in NC for diagnoses of malignant neoplasms of the trachea, bronchus and lung in 2011 (59).

Inpatient hospitalizations of Pasquotank County residents in 2012 for malignant neoplasms of the trachea, bronchus and lung (ICD-9 Code 162) at the four ARHS-region hospitals are displayed in Table 131. In 2012 there were 17 hospitalizations in that code category among the four regional hospitals.

Table 131. Inpatient Hospitalizations of Pasquotank County Residents for Malignant Neoplasms of the Trachea, Bronchus and Lung, ARHS Region Hospitals (2012)

ICD-9 Code	Number of Inpatient Hospitalizations			
	VBER	VCHO	VROA	AH
162	0	0	1	16

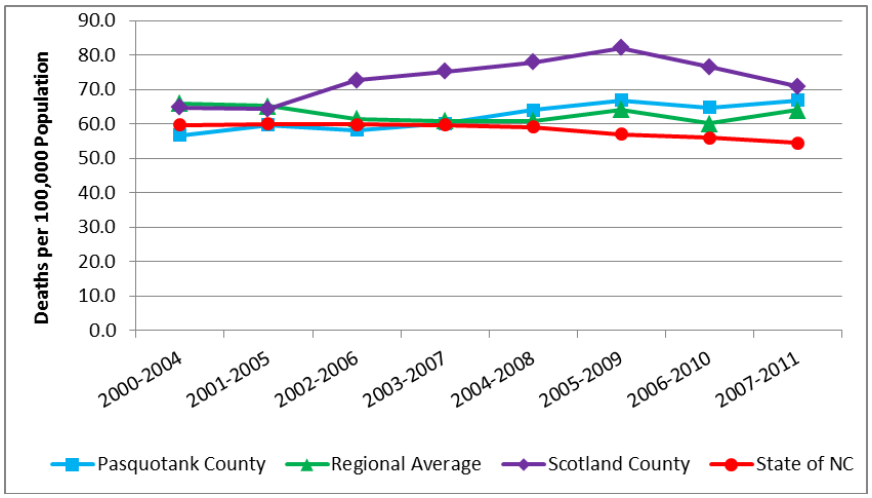
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Lung Cancer Mortality Rate Trend

Figure 12 displays lung cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- The lung cancer mortality rate in Pasquotank County rose steadily over the period cited, from 56.6 in 2000-2004 to 66.8 in 2007-2011, an increase of 18%.
- The lung cancer mortality rate in Scotland County consistently was the highest.
- The lung cancer mortality rate for the region fluctuated, but in 2007-2011 was only 3% lower than in 2000-2004.
- The NC lung cancer mortality rate decreased 9% over the period cited.

Figure 12. Overall Lung Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Lung Cancer Mortality

Table 132 presents lung cancer mortality data for the 2007-2011 aggregate period, stratified by race and sex.

- Due to below-threshold numbers of lung cancer deaths among some stratified populations in Pasquotank County and elsewhere, mortality rates for those groups were suppressed.
- Among white non-Hispanic persons, the lung cancer mortality rate was lowest statewide and highest in Scotland County.
- In Pasquotank County the lung cancer mortality rate for African American non-Hispanics was 14% *lower* than the comparable rate for white non-Hispanics.
- Statewide, the lung cancer mortality rate for African American non-Hispanics was 3% *lower* than the comparable rate for white non-Hispanics.
- All four jurisdictions displayed a gender difference in lung cancer mortality.

Table 132. Race/Ethnicity-Specific and Sex-Specific Lung Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

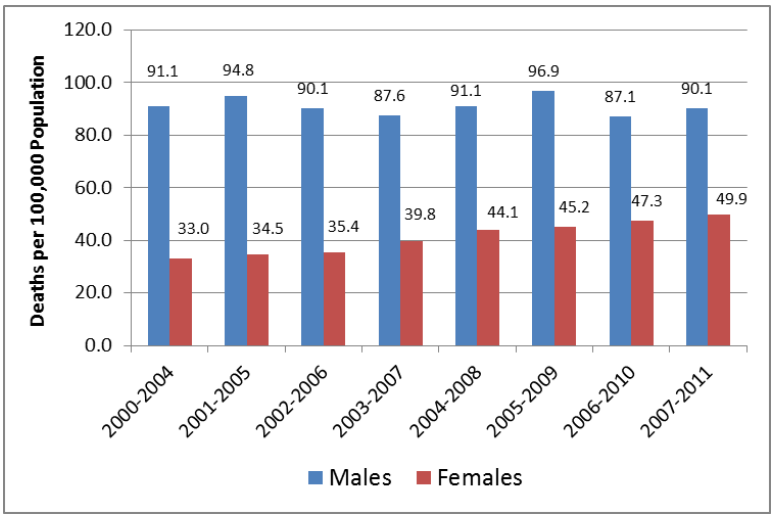
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	106	71.3	45	61.5	0	N/A	0	N/A	87	90.1	64	49.9	151	66.8
Regional Average	54	68.7	18	53.0	0	N/A	0	N/A	44	89.5	29	51.0	72	64.0
Scotland County	98	82.5	34	52.7	9	N/A	0	N/A	79	97.2	62	54.9	141	70.8
State of NC	21,946	55.9	4,667	54.1	369	35.4	110	11.9	15,876	74.4	11,216	40.0	27,092	54.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 13 depicts gender-stratified lung cancer mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- The lung cancer mortality rate among Pasquotank County males fluctuated but changed little in the net over the period shown; meanwhile, the comparable rate among females in the county increased 51%, from 33.0 to 49.9.
- In 2000-2004, the lung cancer mortality rate for Pasquotank County males was 176% higher than the comparable rate for Pasquotank County females; by 2006-2010 the difference had decreased to 81%.

Figure 13. Sex-Specific Lung Cancer Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



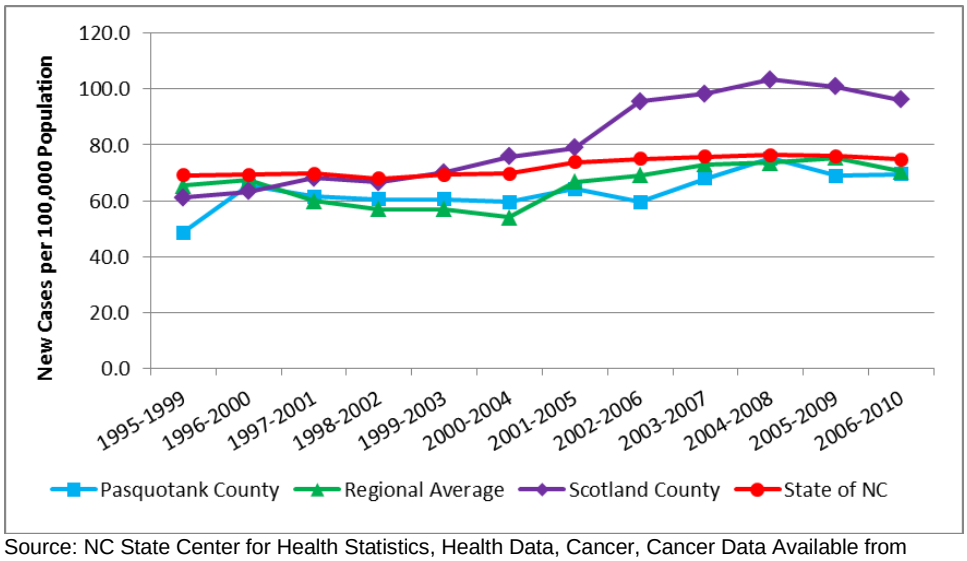
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2006-2013), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Lung Cancer Incidence

Figure 14 plots the incidence rate trend for lung cancer.

- Lung cancer incidence rates increased at least slightly over the period cited in every jurisdiction. The increase in Scotland County was largest: 57%.
- The lung cancer incidence rate in Pasquotank County increased 44%, from 48.5 to 69.6.

Figure 14. Lung Cancer Incidence Rate Trend (Five-Year Aggregate Periods, 1995-1999 through 2006-2010)



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); http://www.schs.state.us.nc/SCHS/CCR/reports.html.

Prostate Cancer

Prostate Cancer Hospitalizations

Table133 summarizes hospital discharge rate data for prostate cancer.

- Most hospital discharge rates for prostate cancer shown in the table were unstable due to small numbers of events.
- Statewide, the discharge rate for prostate cancer was mostly steady at 0.3.

Table 133. Malignant Prostate Neoplasms Hospital Discharge Rate Trend (Single Years, 2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	**0.2**	**0.2**	0.3	0.2	**0.2**	**0.2**	**0.2**
Regional Average	**0.3**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**0.3**
Scotland County	0.6	0.4	0.5	0.4	0.4	0.4	0.6
State of NC	0.3	0.3	0.4	0.3	0.3	0.3	0.3

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, in 2011 there were seven hospitalizations of Pasquotank County residents somewhere in NC for treatment of malignant neoplasms of the prostate (59).

Inpatient hospitalizations of Pasquotank County residents in 2012 for diagnosis and/or treatment of neoplasms of the prostate (ICD-9 Code 185) at the four ARHS-region hospitals are displayed in Table 134. In 2012 there were five inpatient hospitalizations in that code category among the four regional hospitals.

Table 134. Inpatient Hospitalizations of Pasquotank County Residents for Neoplasms of the Prostate, ARHS Region Hospitals (2012)

ICD-9 Code	Number of Inpatient Hospitalizations			
	VBER	VCHO	VROA	AH
185	0	0	0	5

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 135 presents data on outpatient/day surgery procedures of the prostate performed among Pasquotank County residents at the region's four hospitals in 2010-2012. The ICD-9 Procedure Code 60 (Operations on Prostate and Seminal Vesicles) was used to conduct the data search. Note that this data is not necessarily specific to a diagnosis of prostate cancer. Thirty-five such procedures were conducted among Pasquotank County residents in the period 2010-2012.

Table 135. Outpatient Operations on the Prostate and Seminal Vesicles, Pasquotank County Residents, ARHS Region Hospitals (2010-2012)

Year	ICD-9 Procedure Code 60 Operations			
	VBER	VCHO	VROA	AH
2010	0	1	0	16
2011	0	2	0	10
2012	0	0	0	6

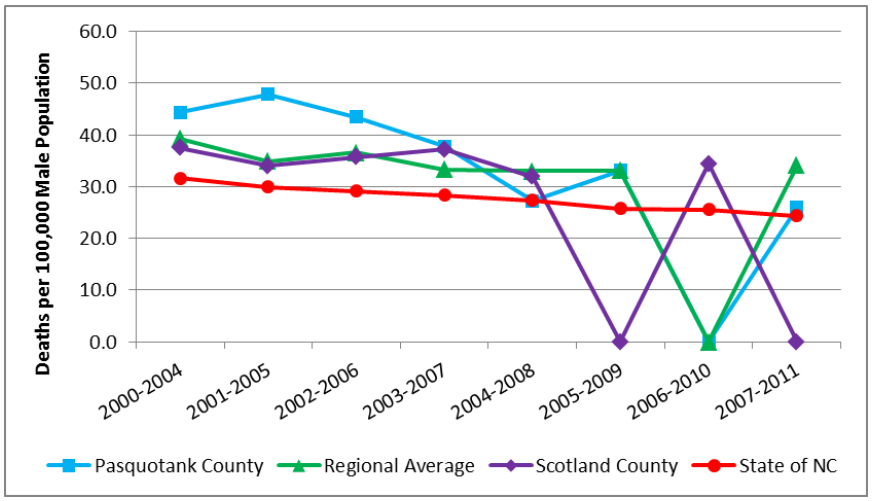
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Prostate Cancer Mortality Rate Trend

Figure 15 displays prostate cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- Note that all the "zero" plots represent suppressed rates, and not true values of zero.
- Stable prostate cancer mortality rates from 2000-2004 through 2004-2008 demonstrated declines in all jurisdictions.
- Region-wide, the "zero" plot for 2006-2010 represents a suppressed rate. However, all the rates should be considered unstable since each mean rate includes several unstable rates.
- The NC prostate cancer mortality rate decreased by 23% over the period cited, from 31.6 in 2000-2004 to 24.3 in 2007-2011.

Figure 15. Overall Prostate Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Racial Disparities in Prostate Cancer Mortality

Table 136 presents prostate cancer mortality rate data for the 2007-2011 aggregate period, stratified by race.

- Due to below-threshold numbers of prostate cancer deaths among racially-stratified populations in all jurisdictions except NC, mortality rates for those groups were suppressed.
- Statewide, the prostate cancer mortality rate for African American non-Hispanic males (55.6) was 2.8 *times* the comparable rate for white non-Hispanic males (19.6).
- Statewide the prostate cancer mortality rates for Other race non-Hispanic men and Hispanic men were 12% and 39% lower, respectively, than the comparable rate for white non-Hispanic men.

Table 136. Race/Ethnicity-Specific Prostate Cancer Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Deaths, Number and Rate (Deaths per 100,000 Male Population)							
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	10	N/A	12	N/A	0	N/A	0	N/A
Regional Average	6	N/A	6	N/A	0	N/A	0	N/A
Scotland County	8	N/A	9	N/A	0	N/A	0	N/A
State of NC	2,882	19.6	1,416	55.6	51	17.3	36	12.0

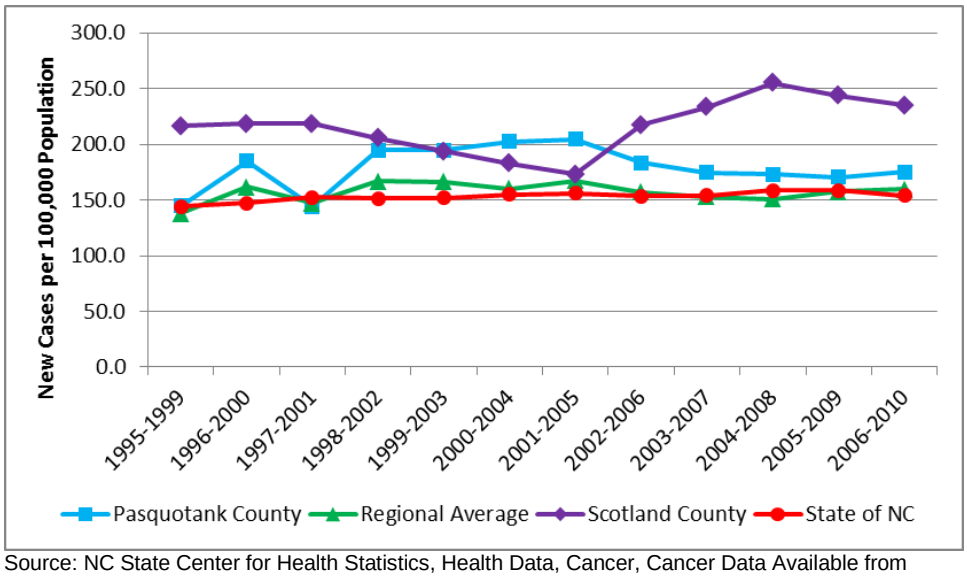
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Prostate Cancer Incidence

Figure 16 plots the incidence rate trend for prostate cancer.

- The prostate cancer incidence rate in Pasquotank County was the highest or second-highest throughout the period cited, and it rose 21% overall from 144.6 in 1995-1999 to 175.3 in 2006-2010.
- The prostate cancer incidence rate for the region fluctuated considerably, but ultimately rose 16% over the period cited; the rate for the state rose 7% over the same period.

Figure 16. Prostate Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1995-1999 through 2006-2010)



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); http://www.schs.state.us.nc/SCHS/CCR/reports.html.

It is not known whether or not increased screening activity played a role in any of the increases in prostate cancer incidence.

Female Breast Cancer

For purposes of this report, breast cancer pertains exclusively to women, although males can and do contract the disease. There were no breast cancer deaths among males in Pasquotank County or Scotland County in the 2007-2011 period; there were, however, 56 breast cancer deaths among males statewide.

Breast Cancer Hospitalizations

Table137 summarizes hospital discharge rate data for breast cancer.

- Most hospital discharge rates for breast cancer in the two counties were unstable due to small numbers of hospitalizations; the rates for the region also were unstable since the regional average was based on county rates many of which were unstable.
- Statewide, the discharge rate for female breast cancer was steady at 0.2 until the most recent period, when it fell to 0.1.

Table 137. Malignant Female Breast Neoplasms Hospital Discharge Rate Trend (Single Years, 2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	0.3	**0.2**	0.2	0.3	0.2	0.3	**0.1**
Regional Average	**0.2**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**
Scotland County	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.3**
State of NC	0.2	0.2	0.2	0.2	0.2	0.2	0.1

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, in 2011 there were four hospitalizations of Pasquotank County residents somewhere in NC for treatment of malignant neoplasms of the female breast (59).

Inpatient hospitalizations of Pasquotank County residents in 2012 for malignant neoplasms of the female breast (ICD-9 Code 174) at the four ARHS-region hospitals are displayed in Table 138. In 2012 there were five inpatient hospitalizations in that category among region's hospitals.

Table 138. Inpatient Hospitalizations of Pasquotank County Residents for Malignant Neoplasms of the Female Breast, ARHS Region Hospitals (2012)

ICD-9 Code	Number of Inpatient Hospitalizations			
	VBER	VCHO	VROA	AH
174	0	0	0	5

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 139 presents data on outpatient/day surgery procedures of the breast performed among Pasquotank County residents at the region's four hospitals in 2010-2012. The ICD-9 Procedure Code 85 (Operations on the Breast) was used to conduct the data search. There were 173 procedures in that code category conducted among Pasquotank County residents over the period 2010-2012.

Table 139. Outpatient Operations on the Breast, Pasquotank County Residents, ARHS Region Hospitals (2010-2012)

Year	ICD-9 Procedure Code 85 Operations			
	VBER	VCHO	VROA	AH
2010	0	0	0	55
2011	0	0	0	60
2012	0	0	0	58

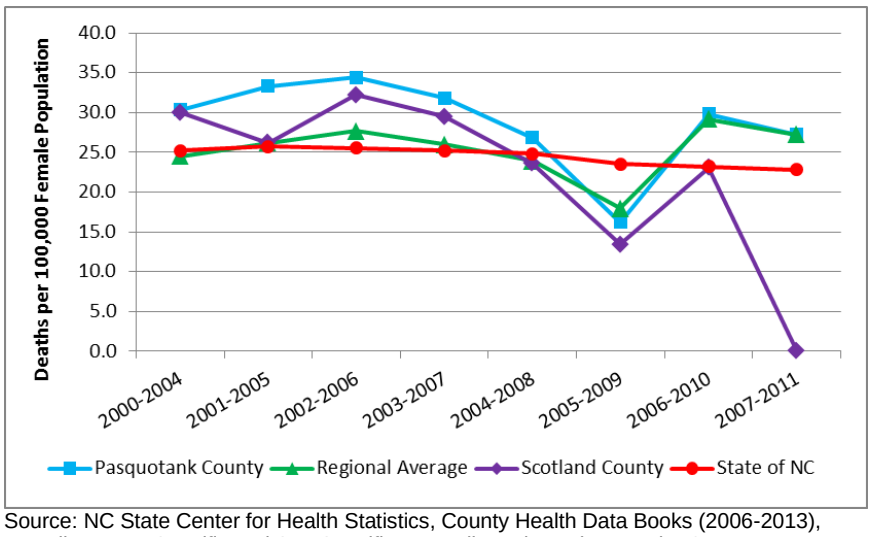
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Breast Cancer Mortality Rate Trend

Figure 17 displays female breast cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- The breast cancer mortality rate in Pasquotank County declined from 2003-2007 to 2005-2009 before spiking again. The breast cancer mortality rate in 2007-2011 (27.2) was only 10% lower than the rate in 2000-2004 (30.3).
- Region-wide the breast cancer mortality rate for 2007-2011 (27.2) was 11% *higher* than the rate for 2000-2004 (24.5).
- The NC breast cancer mortality rate declined 10% over the period cited, from 25.2 to 22.8.

Figure 17. Overall Female Breast Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Racial Disparities in Breast Cancer Mortality

Table 140 presents breast cancer mortality rate data for the 2007-2011 aggregate period, stratified by race.

- Due to below-threshold numbers of breast cancer deaths among stratified groups in Pasquotank County and elsewhere, NC SCHS suppressed the associated mortality rates, leaving no data to compare.
- Statewide, the breast cancer mortality rate for African American non-Hispanic women was 40% *higher* than the comparable rate for white non-Hispanic women, and the rates for Other race non-Hispanic women and Hispanic women were 40% and 60% lower, respectively, than the comparable rate for white non-Hispanic women.

Table 140. Race/Ethnicity-Specific Female Breast Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

Location	Rate (Deaths per 100,000 Female Population)			
	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic
Pasquotank County	N/A	N/A	N/A	N/A
Regional Average	N/A	N/A	N/A	N/A
Scotland County	N/A	N/A	N/A	N/A
State of NC	21.5	30.1	11.9	8.5

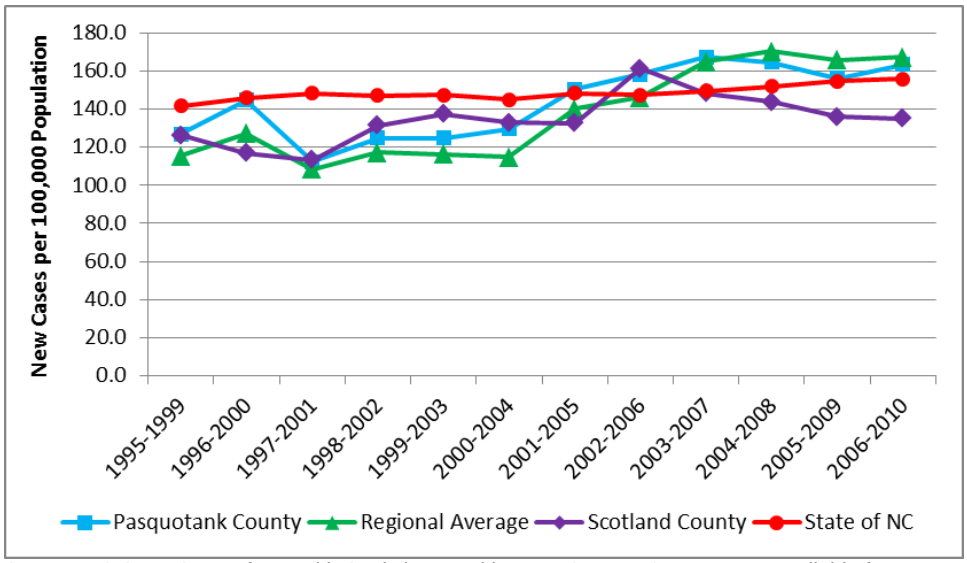
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Breast Cancer Incidence

Figure 18 plots the incidence rate trend for breast cancer.

- Breast cancer incidence rates increased at least slightly in every jurisdiction over the period cited. In Pasquotank County the overall increase was 29%, from 126.7 in 1995-1999 to 163.3 in 2006-2010. Comparable net increases were 7% in Scotland County, 45% region-wide, and 10% statewide.

Figure 18. Breast Cancer Incidence Rate Trend (Five-Year Aggregate Periods, 1995-1999 through 2006-2010)



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); http://www.schs.state.us.nc/SCHS/CCR/reports.html.

It is not known whether or not increased screening activity played a role in any of the increases in breast cancer incidence, although breast cancer screening activities are common.

Colon Cancer

The category of cancer referred to as colon cancer (sometimes referred to as *colorectal cancer*) traditionally *also* includes cancers of the rectum and anus.

Colon Cancer Hospitalizations

Table141 summarizes hospital discharge rate data for malignant neoplasms of the colon, rectum and anus. The hospital discharge rate for colon cancer in Pasquotank County peaked in 2009 and has been lower since, but was higher than the state rate in 2009-2011.

Table 141. Malignant Colon, Rectum and Anus Neoplasms Hospital Discharge Rate Trend (Single Years, 2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	0.4	0.6	0.4	0.4	0.6	0.5	0.5
Regional Average	**0.5**	**0.7**	**0.6**	**0.5**	**0.5**	**0.3**	**0.4**
Scotland County	0.5	0.4	0.7	0.4	0.7	0.4	0.3
State of NC	0.5	0.5	0.5	0.4	0.4	0.4	0.4

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS data on Inpatient Hospital Utilization and Charges by Principal Diagnosis, 20 Pasquotank County residents were hospitalized somewhere in NC with diagnoses of malignant neoplasms of the colon, rectum and anus in 2011 (59).

Inpatient hospitalizations of Pasquotank County residents in 2012 for malignant neoplasms of the colon, rectum and anus (ICD-9 Codes 153 and 154) at the four ARHS-region hospitals are displayed in Table 142. In 2012 there were 13 inpatient admissions in those code categories among the four regional hospitals.

Table 142. Inpatient Hospitalizations of Pasquotank County Residents for Malignant Neoplasms of the Colon, Rectum and Anus, ARHS Region Hospitals (2012)

DRG Code	Number of Inpatient Hospitalizations			
	VBER	VCHO	VROA	AH
153	0	0	0	11
154	0	0	0	2

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

There are several diagnostic procedures routinely performed to diagnose colon cancer, including sigmoidoscopy and colonoscopy. Those procedures, as well as others that are more invasive, are assigned the ICD-9 procedure code 45.2, Diagnostic Procedures on the Large Intestine. In addition, a colonoscopy may also include excision of polyps or other tissue coincident with the examination; that procedure is coded 45.4. Table 143 tracks outpatient/day surgery admissions in those categories for Pasquotank County residents at the four regional hospitals. There were 1,796 total procedures in these categories among Pasquotank County residents in the period from 2010-2012.

Table 143. Outpatient Procedures on Large Intestine, Pasquotank County Residents, ARHS Region Hospitals (2010-2012)

Year	ICD-9 Procedure Code 45.2 and 45.4 Procedures			
	VBER	VCHO	VROA	AH
2010	0	0	0	550
2011	0	0	0	608
2012	0	0	0	638

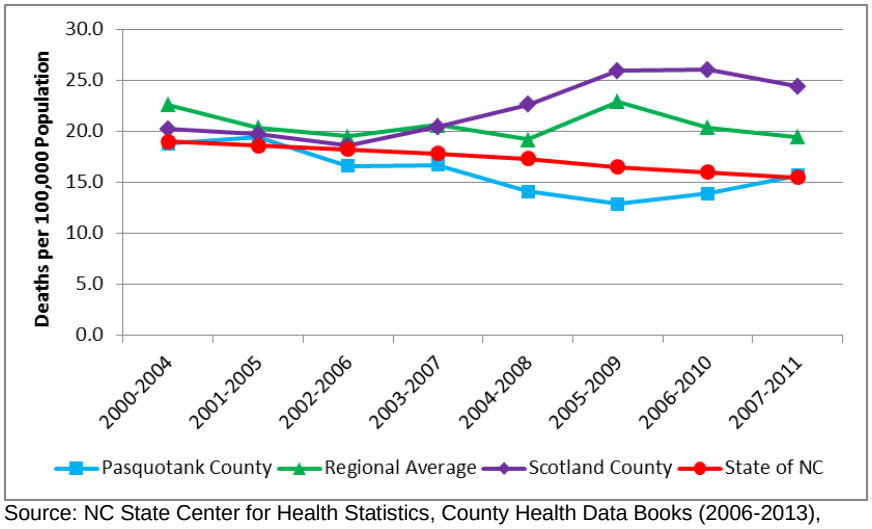
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Colon Cancer Mortality Rate Trend

Figure 19 displays colon cancer mortality rate trends over time for the four jurisdictions being compared in this CHA.

- The colon cancer mortality rate in Pasquotank County fluctuated over the period cited but fell 16% overall, from 18.8 in 2000-2004 to 15.7 in 2007-2011. For most of the period cited, the Pasquotank County colon cancer rate was the lowest among the comparators.
- The regional colon cancer mortality rate fell 14% over the period cited.
- The NC colon cancer mortality rate declined 18% overall in the period cited.
- The colon cancer mortality rate in Scotland County increased 21% over the same period.

Figure 19. Overall Colon Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Colon Cancer Mortality

Table 144 presents colon cancer mortality data for the 2007-2011 aggregate period, stratified by race and sex.

- Due to below-threshold numbers of colon cancer deaths among most stratified populations at the county level, mortality rates for those groups were suppressed.
- Statewide, the colon cancer mortality rate for African American non-Hispanics was 52% *higher* than the comparable rate for white non-Hispanics, and the rates for other non-Hispanics and Hispanics were far below the comparable rate for white non-Hispanics.

Table 144. Race/Ethnicity-Specific and Sex-Specific Colon Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

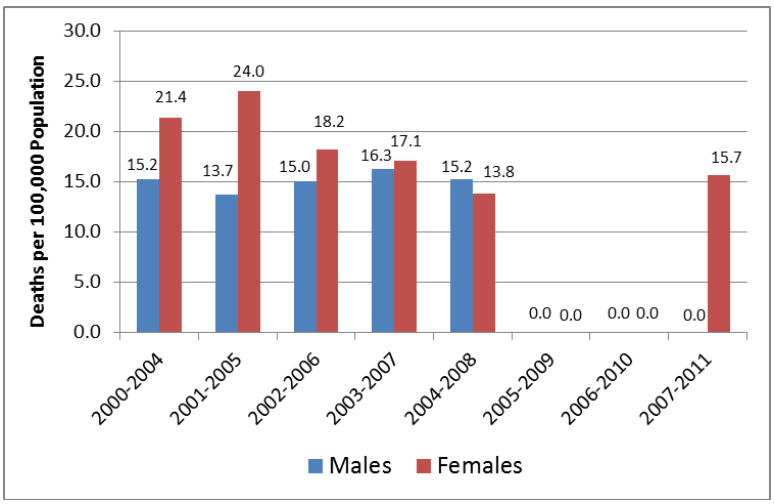
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	20	13.8	15	N/A	0	N/A	0	N/A	14	N/A	21	15.8	35	15.7
Regional Average	13	13.8	8	N/A	0	N/A	0	N/A	10	N/A	12	15.8	21	19.4
Scotland County	29	25.4	16	N/A	3	N/A	0	N/A	31	38.7	17	N/A	48	24.4
State of NC	5,604	14.5	1,851	22.1	96	9.6	63	6.3	3,964	19.0	3,650	12.9	7,614	15.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 20 depicts gender-stratified colon cancer mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- There may be a gender difference in colon cancer mortality rates in Pasquotank County that is changing. Although all the rates for males were either unstable or suppressed, and only the first four and the last data points for females were technically stable, the degree of difference between the rates for men and women appears to be narrowing, as the rate for females decreased and the rate for males increased. Note that "zero" signifies only that a rate was suppressed.

Figure 20. Sex-Specific Colon Cancer Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



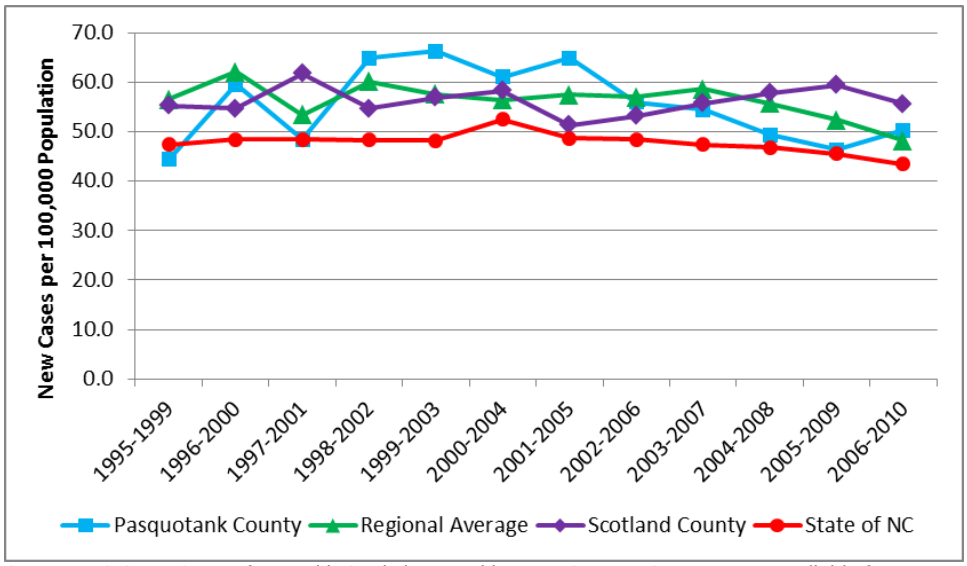
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2006-2013), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Colon Cancer Incidence

Figure 21 plots the incidence rate trend for colon cancer.

- The colon cancer incidence rate in Pasquotank County fluctuated at an elevated level before falling, but the most recent rate (50.3 in 2006-2010) was still 13% higher than the rate in 1995-1999 (44.4).
- The regional colon cancer incidence rate, relatively steady for several aggregate periods, fell recently to a 10-year low of 48.2
- The Scotland County colon cancer incidence rate fluctuated over the period cited but was little changed in 2006-2010 (55.6) from 1995-1999 (55.2).
- At the state level, the colon cancer incidence rate fell from 47.4 in 1995-1999 to 43.4 in 2006-2010, an overall decrease of 8%.

Figure 21. Colon Cancer Incidence Rate Trend
(Five-Year Aggregate Periods, 1995-1999 through 2006-2010)



Source: NC State Center for Health Statistics, Health Data, Cancer, Cancer Data Available from SCHS, Annual Reports, NC Cancer Incidence Rates for All Counties by Specified Site (Years as noted); http://www.schs.state.us.nc/SCHS/CCR/reports.html.

Pancreas Cancer

Although the pancreas cancer mortality rate is the fifth highest among the site-specific cancers in NC, some of the typical data sets referenced in this report do *not* cover this cancer; among them are the Inpatient Hospital Utilization and Charges dataset and the Cancer Incidence dataset. Pancreas cancer mortality data *is* available.

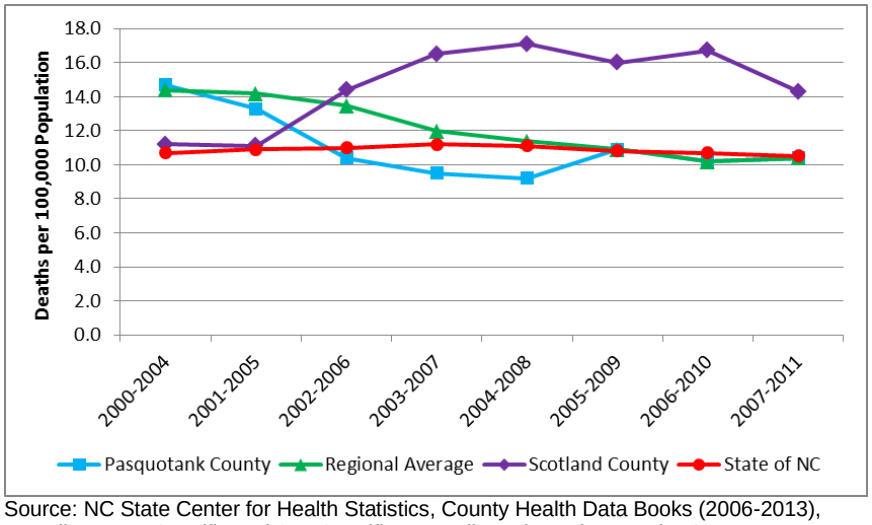
Pancreas Cancer Mortality Rate Trend

Figure 22 displays pancreas cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- The pancreas cancer mortality rate in Pasquotank County, which was stable throughout the period cited, fell 29% from 14.7 in 2000-2004 to 10.4 in 2007-2011.

- Region-wide the pancreas cancer mortality rate appeared to decline 29% over the period cited, but the rates should be considered to be unstable, since the regional average was calculated from largely unstable county rates.
- The NC pancreas cancer mortality rate changed little throughout the period cited.
- The last six data points plotted for Scotland County were stable, so the significant difference between that county's pancreas cancer mortality rate and the state rate (also stable) likely was real.

Figure 22. Overall Pancreas Cancer Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Pancreas Cancer Mortality

Table 145 presents pancreas cancer mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of pancreas cancer deaths among all racially stratified populations in Pasquotank County and its comparator jurisdictions, all mortality rates for those groups were suppressed so there is no data below the state level to compare.
- Statewide, the pancreas cancer mortality rate for African American non-Hispanics was 39% *higher* than the comparable rate for white non-Hispanics, and the rates for other non-Hispanics and Hispanics were below the comparable rate for white non-Hispanics.
- At the state level the pancreas cancer mortality rate for males (11.8) was 26% higher than the comparable rate for females (9.4).

Table 145. Race/Ethnicity-Specific and Sex-Specific Pancreas Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

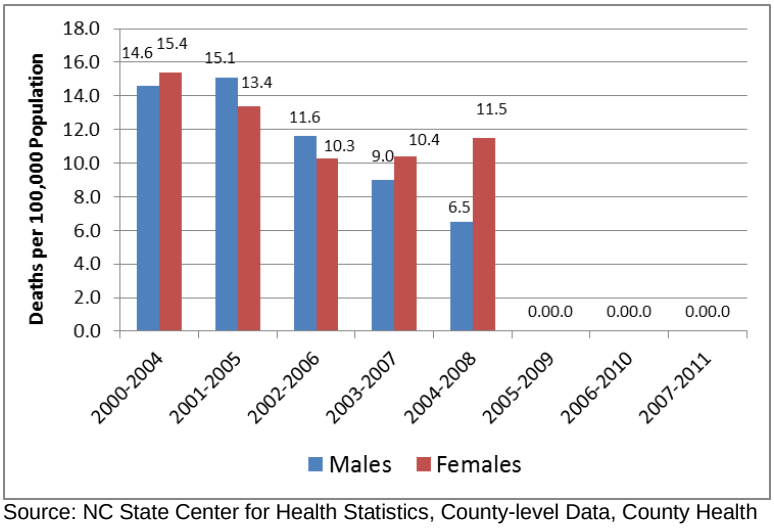
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	13	N/A	11	N/A	0	N/A	0	N/A	6	N/A	18	N/A	24	10.4
Regional Average	7	N/A	6	N/A	0	N/A	0	N/A	5	N/A	8	N/A	13	10
Scotland County	18	N/A	8	N/A	2	N/A	0	N/A	7	N/A	21	19.3	28	14.3
State of NC	3,925	10.0	1,152	13.9	66	6.8	41	4.0	2,519	11.8	2,665	9.4	5,184	10.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 23 depicts gender-stratified pancreas cancer mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- At first glance it appears that there may be a shifting gender difference in pancreas cancer mortality in Pasquotank County, with higher rates for males being supplanted by higher rates for females. However, since all the gender-stratified pancreas cancer mortality rates shown were based on small numbers and therefore likely unstable, they should be interpreted with caution. Other rates were suppressed, although they are labeled “0”.

Figure 23. Sex-Specific Pancreas Cancer Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2006-2013), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Pancreas Cancer Incidence

Historical pancreas cancer incidence rates are not available from NC SCHS at the present time.

Cerebrovascular Disease

Cerebrovascular disease describes the physiological conditions that lead to stroke. Strokes happen when blood flow to the brain stops and brain cells begin to die. There are two types of stroke. Ischemic stroke (the more common type) is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other kind, called hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds into the brain (61).

In the 2007-2011 aggregate period cerebrovascular disease was the third leading cause of death in Pasquotank County and Scotland County, and fourth in the Albemarle region and the state of NC (cited previously).

Cerebrovascular Disease Hospitalizations

Table 146 presents the hospital discharge rate trend data for cerebrovascular disease (CVD). According to this data, CVD caused a significant proportion of illness-related hospitalizations among Pasquotank County residents over time, but for the most part at a lower rate than in Scotland County or the state as a whole.

Table 146. Cerebrovascular Disease Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	3.2	3.3	2.9	2.4	2.6	2.5	2.2
Regional Average	3.1	3.0	2.8	2.5	2.4	2.8	2.2
Scotland County	4.6	4.4	3.8	4.5	5.3	4.5	4.9
State of NC	3.2	3.1	3.1	3.0	3.1	3.1	3.0

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 89 hospital admissions for CVD among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

In the ICD-9 system, cerebrovascular disease is in the category Diseases of the Circulatory System, within the specific code range of 430-438. Table 147 presents data on 2012 hospitalizations of Pasquotank County residents for diagnoses of cerebrovascular disease. There were 97 hospitalizations at the four ARHS region hospitals for treatment of cerebrovascular disease among Pasquotank County residents in 2012.

Table 147. Inpatient Hospitalizations of Pasquotank County Residents for Cerebrovascular Disease, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
430-438.9	**Cerebrovascular disease**	0	0	0	97

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 148 presents data on the number of emergency department admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with cerebrovascular disease. For the period from 2010-2012 there was a total of 123 and an annual average of 41 ED visits to the region's four hospitals by Pasquotank County residents for diagnoses of cerebrovascular disease.

Table 148. Emergency Department Admissions of Pasquotank County Residents for Cerebrovascular Disease, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
430-438.9	Cerebrovascular disease	49	43	31

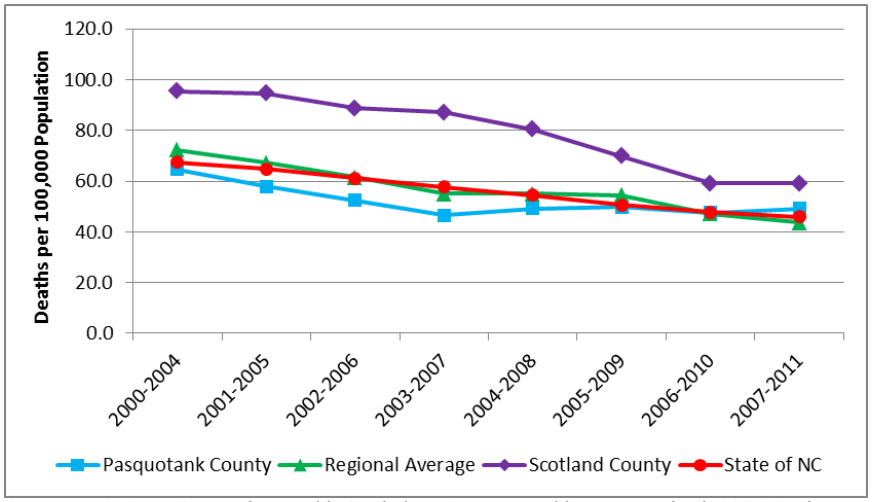
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Cerebrovascular Disease Mortality Rate Trend

Figure 24 displays the CVD mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The highest CVD mortality rate in every aggregate period was in Scotland County.
- The CVD mortality rate in Pasquotank County was lower than the comparable rates for the region and the state throughout most the interval cited.
- CVD mortality rates in every jurisdiction fell over the period cited. The decrease was largest (38%) in Scotland County. In Pasquotank County the CVD mortality rate fell 24% from 64.5 in 2000-2004 to 49.1 in 2007-2011

Figure 24. Overall Cerebrovascular Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Cerebrovascular Disease Mortality

Table 149 presents CVD mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of CVD disease deaths among some stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the CVD mortality rate was highest in Scotland County and lowest region-wide; the second lowest rate was in Pasquotank County.
- Among African American non-Hispanic persons the CVD mortality rate was highest among the comparators in Pasquotank County, where mortality for African American non-Hispanic persons was 82% higher than the rate for white non-Hispanic persons. A similar racial disparity in CVD mortality was noted in the other jurisdictions as well.
- In all four jurisdictions, the CVD mortality rate for males was higher than the comparable rate for females.

Table 149. Race/Ethnicity-Specific and Sex-Specific Cerebrovascular Disease Mortality (Single Five-Year Aggregate Period, 2007-2011)

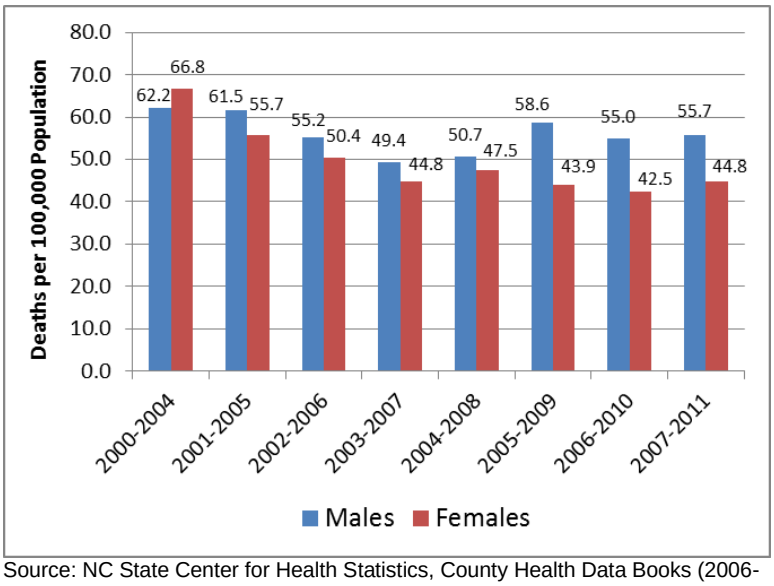
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	60	39.6	50	72.1	0	N/A	0	N/A	47	55.7	63	44.8	110	49.1
Regional Average	29	37.3	21	67.6	0	N/A	0	N/A	21	64.2	29	40.5	51	43.7
Scotland County	71	60.5	35	54.6	7	N/A	0	N/A	48	65.6	65	52.6	113	59.1
State of NC	16,418	43.0	4,933	62.4	280	32.6	143	15.1	8,730	46.8	13,044	44.5	21,774	46.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 25 depicts gender-stratified CVD mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- The graph demonstrates that the CVD mortality rate among Pasquotank County males was near to the CVD mortality rate among Pasquotank County females over the earlier periods noted in the graph. Recently, however, a gender gap seemed to develop later, as the CVD mortality rate for females decreased and the rate for males increased.

Figure 25. Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Pasquotank County
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 150 presents CVD mortality rate data fully stratified by gender and race/ethnicity for the period 2007-2011.

- Because of below-threshold numbers of CVD deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates, leaving little data to compare.
- In Pasquotank County, the region and the state, the CVD mortality rate was higher among African American non-Hispanic males than among any other stratified group. CVD mortality rates statewide were lowest among male and female Hispanics.
- At the state level, CVD mortality rates were higher for males than for females in every racial group *except* Hispanics, where the rate for females was higher than the comparable rate for males.

Table 150. Race/Ethnicity and Sex-Specific Cerebrovascular Disease Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic
Pasquotank County	41.4	94.9	N/A	N/A	38.3	60.5	N/A	N/A
Regional Average	57.8	94.9	N/A	N/A	38.2	60.5	N/A	N/A
Scotland County	64.9	N/A	N/A	N/A	55.6	N/A	N/A	N/A
State of NC	43.3	67.9	37.4	14.0	42.0	57.7	28.5	15.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Chronic Lower Respiratory Disease (CLRD)

Chronic lower respiratory disease (CLRD) is composed of three major diseases, chronic bronchitis, emphysema, and asthma, all of which are characterized by shortness of breath caused by airway obstruction and sometimes lung tissue destruction. The obstruction is irreversible in chronic bronchitis and emphysema, reversible in asthma. Before 1999, CLRD was called *chronic obstructive pulmonary disease* (COPD). Some in the field still use the designation COPD, but limit it to mean chronic bronchitis and emphysema only. In the US, tobacco use is a key factor in the development and progression of CLRD/COPD, but exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role (62).

CLRD was the fourth leading cause of death in Pasquotank County and Scotland County, and the third leading cause of death in the ARHS region and NC in the 2007-2011 period (cited previously).

CLRD/COPD Hospitalizations

Table 151 presents the hospital discharge rate trend data for COPD (the term still used by some data-compiling organizations). According to this data, COPD caused a significant proportion of illness-related hospitalizations among Pasquotank County residents over time, for the most part at a higher rate than in the region or state. The COPD mortality rate was consistently highest in Scotland County.

Table 151. COPD Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	6.0	5.4	5.2	5.3	3.7	2.9	4.2
Regional Average	4.3	3.8	4.0	4.3	3.3	3.3	3.7
Scotland County	7.9	7.0	6.5	7.0	7.7	5.9	7.0
State of NC	3.5	3.2	3.1	3.4	3.4	3.2	3.2

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 171 hospital admissions for COPD among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

In the ICD-9 system, Chronic Obstructive Pulmonary Disease and Allied Conditions appear in the code range of 490-496. This category includes chronic bronchitis, emphysema, asthma, and other forms of chronic airway obstruction. Table 152 presents data on 2012 inpatient hospitalizations of Pasquotank County residents for diagnoses of COPD. There were 174 inpatient hospitalizations at the four ARHS region hospitals for treatment of COPD among Pasquotank County residents in 2012.

Table 152. Inpatient Hospitalizations of Pasquotank County Residents for COPD, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
490-496	**Chronic obstructive pulmonary disease**	0	0	0	174

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 153 presents data on the number of emergency department admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with COPD. For the period from 2010-2012 there was a total of 1,940 and an annual average of 647 ED visits to the region's four hospitals by Pasquotank County residents for diagnoses of COPD.

Table 153. Emergency Department Admissions of Pasquotank County Residents for COPD, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
490-496	**Chronic obstructive pulmonary disease**	430	701	809

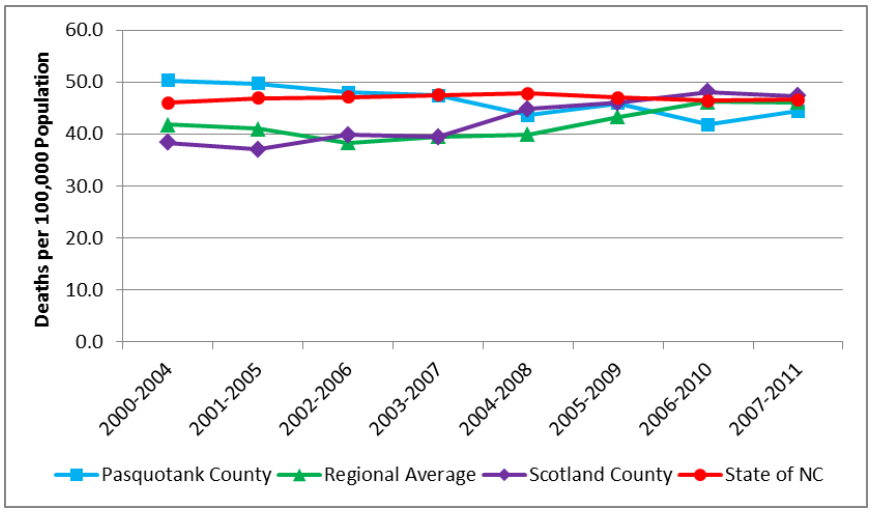
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

CLRD Mortality Rate Trend

Figure 26 displays the CLRD mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The CLRD mortality rate in Pasquotank County fell 12% overall, decreasing from 50.3 in 2000-2004 to 44.4 in 2007-2011.
- The regional CLRD mortality rate rose by 10% between 2000-2004 and 2007-2011.
- The CLRD mortality rate in Scotland County also rose 23% over the same interval.
- At the state level, the CLRD mortality rate was essentially unchanged over the period.

Figure 26. Overall CLRD Mortality Rate Trend
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in CLRD Mortality

Table 154 presents CLRD mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of CLRD disease deaths among some stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the CLRD mortality rate was lowest statewide and highest in Scotland County.
- There appeared to be a gender differences in CLRD mortality in each jurisdiction, with the rate for males higher than the rate for females in every case.

Table 154. Race/Ethnicity-Specific and Sex-Specific CLRD Mortality
(Single Five-Year Aggregate Period, 2007-2011)

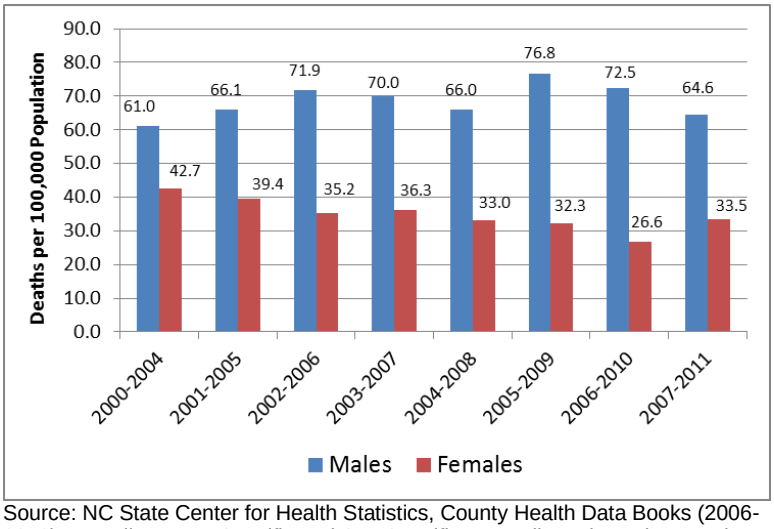
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	85	56.1	15	N/A	0	N/A	0	N/A	54	64.6	46	33.5	100	44.4
Regional Average	41	52.9	9	42.5	0	N/A	0	N/A	29	73.4	22	35.4	51	46.1
Scotland County	69	56.5	19	N/A	3	N/A	0	N/A	47	64.5	44	37.5	91	47.3
State of NC	19,755	51.3	2,287	28.9	176	20.3	56	7.8	10,447	54.9	11,827	41.7	22,274	46.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 27 depicts gender-stratified CLRD mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that the gender difference in the CLRD mortality rate noted in Pasquotank County for 2007-2011 has been longstanding. The CLRD mortality rate among Pasquotank County males was from 43% to 173% higher than the comparable rate for females across the aggregate periods cited. For 2007-2011 the CLRD mortality rate for males was 93% higher than the rate for females.

Figure 27. Sex-Specific CLRD Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 155 presents CLRD mortality rate data fully stratified by gender and race/ethnicity for the period 2007-2011.

- Because of below-threshold numbers of CLRD deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates.
- Among white non-Hispanic males the highest CLRD mortality rate was the regional average; the second-highest rate was in Pasquotank County.
- At the state level, the CLRD mortality rate was highest among white non-Hispanic males, followed by white non-Hispanic females, African American non-Hispanic males, non-Hispanic males of other races, and African American non-Hispanic females. CLRD mortality rates statewide were lowest among male and female Hispanics.
- At the state level CLRD mortality rates were higher for males than for females in every racial group *except* Hispanics, where the rate for females was higher than the comparable rate for males.

Table 155. Race/Ethnicity and Sex-Specific CLRD Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic	White, Non-Hispanic	Af Amer, Non-Hispanic	Other Races, Non-Hispanic	Hispanic
Pasquotank County	77.1	N/A	N/A	N/A	43.0	N/A	N/A	N/A
Regional Average	78.4	83.2	N/A	N/A	42.4	N/A	N/A	N/A
Scotland County	63.2	N/A	N/A	N/A	53.4	N/A	N/A	N/A
State of NC	58.2	43.9	27.2	7.0	47.3	21.1	15.6	8.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

All Other Unintentional Injury

This category includes death without purposeful intent due to poisoning, falls, burns, choking, animal bites, drowning, and occupational or recreational injuries; it expressly excludes unintentional injury due to motor vehicle crashes. (Death due to injury involving motor vehicles is a separate cause of death and was covered previously.)

All other unintentional injury was the fifth leading cause of death in Pasquotank County, the sixth region-wide and in Scotland County, and the fifth statewide in the 2007-2011 period (cited previously).

All Other Unintentional Injury Hospitalizations

Neither the NC SCHS nor the hospitals participating in this assessment use a diagnosis specific for hospitalizations caused by non-motor vehicle injury. Instead, Table 156 presents the hospital discharge rate trend data from NC SCHS for a category called *injuries and poisonings,* which includes hospitalizations for injuries resulting from motor vehicle crashes as well as for all other unintentional injuries.

- The highest mortality due to non-motor vehicle injuries among the four comparators was in Scotland County, where the mortality rate was at times almost twice the rate for Pasquotank County or the ARHS region.

Table 156. Injuries and Poisonings Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	6.9	6.3	6.3	5.1	4.7	5.1	4.5
Regional Average	6.6	6.3	6.3	5.6	5.3	5.6	5.2
Scotland County	10.2	10.7	11.3	10.2	11.6	11.1	11.8
State of NC	8.5	8.6	8.6	8.5	8.3	8.2	8.2

According to NC SCHS, in 2011 there were 182 injury and poisoning hospitalizations among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

The region's hospitals maintain records of hospitalizations and ED admissions in an ICD-9 category called Injury and Poisoning (ICD-9 Codes 800-999).

Table 157 presents data on 2012 inpatient hospitalizations of Pasquotank County residents for diagnoses of injury or poisoning. Note that this list does *not* include all diagnoses in the category. There were 152 inpatient hospitalizations at the four ARHS hospitals for treatment of injuries and poisoning among Pasquotank County residents in 2012.

Table 157. Inpatient Hospitalizations of Pasquotank County Residents for Injury and Poisoning, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
800-829	Fractures	0	2	1	59
830-839	Dislocations	0	0	1	0
840-848	Sprains and strains	0	0	0	1
850-854	Intracranial injury	0	0	0	1
870-897	Open wounds	0	0	0	1
910-919	Superficial injury	0	0	0	0
930-939	Foreign body entering through orifice	0	0	0	0
960-979	Poisoning by drugs and medicinal substances	0	0	0	23
990--995	Other effects of external causes	0	0	0	2
996-999	Complications of surgical and medical care	0	2	1	58

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 158 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with injury and poisoning. For the period from 2010-2012 there was a total of 13,676 and an annual average of 4,559 ED visits to the region's hospitals by Pasquotank County residents for diagnoses of injury and poisoning in the categories listed below.

Table 158. Emergency Department Admissions of Pasquotank County Residents for Injury and Poisoning, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
800-829	Fractures	415	420	478	1,313
830-839	Dislocations	70	107	101	278
840-848	Sprains and strains	1,048	1,229	1,271	3,548
850-854	Intracranial injury	43	46	61	150
860-869	Internal injury	14	13	7	34
870-897	Open wounds	695	738	828	2,261
900-904	Injury to blood vessels	0	1	0	1
905-909	Late effects of external causes	1	3	1	5
910-919	Superficial injury	259	372	360	991
920-924	Contusions	672	774	921	2,367
925-929	Crushing injury	31	16	16	63
930-939	Foreign body entering through orifice	97	107	120	324
940-949	Burns	56	73	69	198
950-957	Injury to nerves and spinal cord	3	3	3	9
958-959	Traumatic complications	272	362	391	1,025
960-979	Poisoning by drugs and medicinal substances	44	37	36	117
980-989	Toxic effects of chiefly nonmedicinal substances	48	31	60	139
990--995	Other effects of external causes	203	213	224	640
996-999	Complications of surgical and medical care	66	61	86	213
TOTAL		4,037	4,606	5,033	13,676

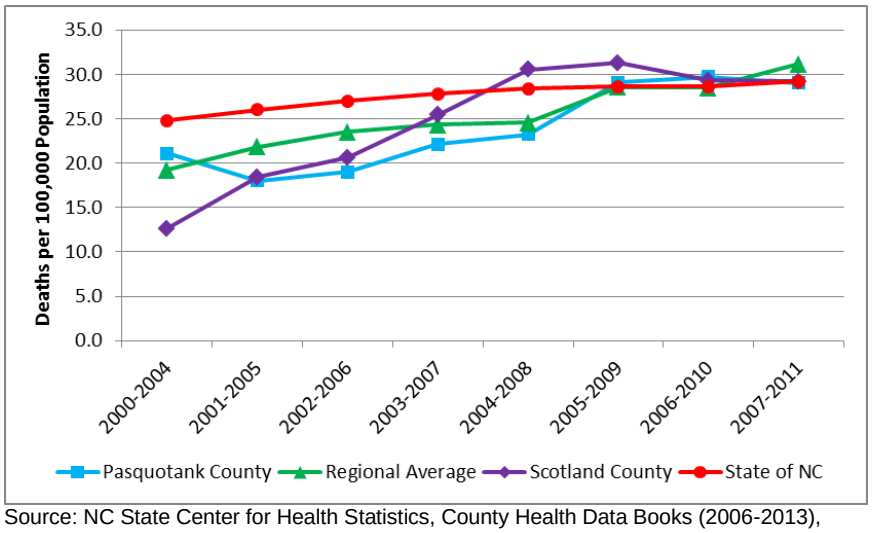
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

All Other Unintentional Injury Mortality Rate Trend

Figure 28 displays the all other unintentional injury mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- Although the lowest among the comparators throughout much of the period cited, the non-motor vehicle injury mortality rate in Pasquotank County was comparable to the others by 2007-2011. Over the period cited, the county rate rose from 21.1 to 29.0, an increase of 37%.
- Region-wide the mortality rate for all other unintentional injuries rose 62% over the period cited, from 19.3 in 2000-2004 to 31.2 in 2007-2011.
- At the state level, the all other unintentional injury mortality rate rose 18% over the period cited.
- The largest increase overall took place in Scotland County, where the non-motor vehicle injury mortality rate rose 132%.

Figure 28. Overall All Other Unintentional Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in All Other Unintentional Injury Mortality

Table 159 presents all other unintentional injury mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of all other unintentional injury deaths among some stratified populations, mortality rates were suppressed for those groups.
- Regionally, the mortality rate for African American non-Hispanics was 14% higher than the comparable rate for white non-Hispanics; at the state level, the rate for white non-Hispanics was 66% higher than the rate for African American non-Hispanics.
- There appeared to be gender differences in the all other unintentional injury mortality rate in each jurisdiction with non-suppressed rates, with rates for males higher than rates for females.

Table 159. Race/Ethnicity-Specific and Sex-Specific All Other Unintentional Injury Mortality (Single Five-Year Aggregate Period, 2007-2011)

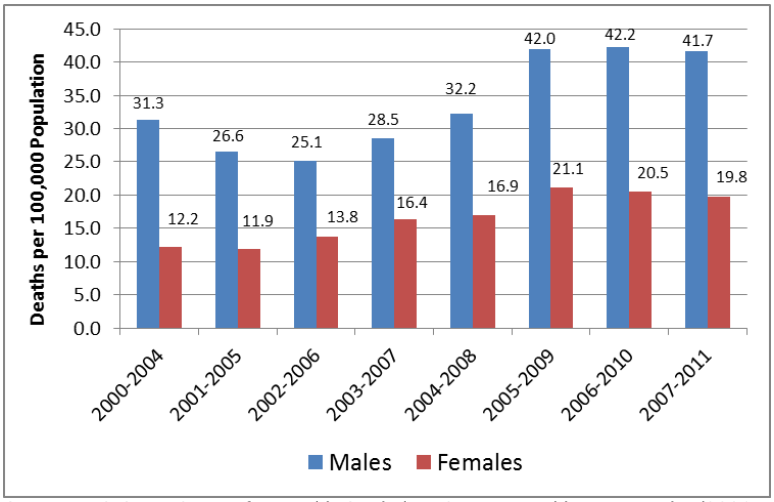
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	47	34.7	14	N/A	1	N/A	1	N/A	39	41.7	24	19.8	63	29.0
Regional Average	22	32.1	8	36.7	0	N/A	1	N/A	18	46.7	13	19.8	31	31.2
Scotland County	31	33.9	14	N/A	8	N/A	0	N/A	37	47.3	16	N/A	53	35.0
State of NC	11,385	33.1	1,854	20.3	246	19.6	296	11.3	8,140	38.8	5,641	20.9	13,781	29.2

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 29 depicts gender-stratified all other unintentional injury mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- This data appears to indicate a significant gender disparity in mortality, with males experiencing the higher rate. In the 2007-2011 aggregate period the all other injury mortality rate among males in Pasquotank County was 111% higher than the comparable rate for females.

Figure 29. Sex-Specific All Other Unintentional Injury Mortality Rate Trend, Pasquotank County
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of all other unintentional injury deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the all other unintentional injury mortality rate in all racial groups was higher among males than females. Statewide, the all other unintentional injury mortality rate was highest among white non-Hispanic males (43.3), followed by African American non-Hispanic males (30.1), non-Hispanic males of other races (28.2), and white non-Hispanic females (24.1). All other unintentional injury mortality rates statewide were lowest among female Hispanics (5.9), other non-Hispanic females (13.1), and African American non-Hispanic females (13.3).

Alzheimer's Disease

Alzheimer's disease is a progressive neurodegenerative disease affecting mental abilities including memory, cognition and language. Alzheimer's disease is characterized by memory loss and dementia. The risk of developing Alzheimer's disease increases with age (e.g., almost half of those 85 years and older suffer from Alzheimer's disease). Early-onset Alzheimer's has been shown to be genetic in origin, but a relationship between genetics and the late-onset form of the disease has not been demonstrated. No other definitive causes have been identified (63).

Alzheimer's disease was the sixth leading cause of death in Pasquotank County and the state as a whole, the eighth in the ARHS region and the eleventh leading cause of death in Scotland County in the 2007-2011 aggregate period (cited previously).

Alzheimer's Disease Hospitalizations

At the present time the NC SCHS does not track Alzheimer's disease-related hospitalizations.

Alzheimer's disease is coded 331.0 in the ICD-9 system; however, it can be difficult to diagnose and may first be identified as another form of dementia. Table 160 lists inpatient hospitalizations among Pasquotank County residents in several of the relevant ICD-9 code categories in 2012. There were four hospitalizations of Pasquotank County residents region-wide in 2012 for diagnoses associated with Alzheimer's disease and other forms of dementia.

Table 160. Inpatient Hospitalizations of Pasquotank County Residents for Alzheimer's Disease and Other Forms of Dementia, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
331.0	Alzheimer's disease	0	0	0	0
331.1	Frontotemporal dementia	0	0	0	0
331.2	Senile degeneration of the brain	0	0	0	0
290	Dementia	0	0	0	0
294.1	Dementia in condition classified elsewhere	0	0	0	0
294.2	Dementia, unspecified	0	0	1	3

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 161 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with Alzheimer's disease and other forms of dementia. For the period from 2010-2012 there was a total of 49 ED visits to the region's four hospitals by Pasquotank County residents for diagnoses of Alzheimer's disease or other forms of dementia.

Table 161. Emergency Department Admissions of Pasquotank County Residents for Alzheimer's Disease and Other Forms of Dementia, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
331.0	Alzheimer's disease	10	11	7	28
331.1	Frontotemporal dementia	0	0	0	0
331.2	Senile degeneration of the brain	0	0	0	0
290	Dementia	0	0	1	1
294.1	Dementia in condition classified elsewhere	0	0	0	0
294.2	Dementia, unspecified	0	3	17	20

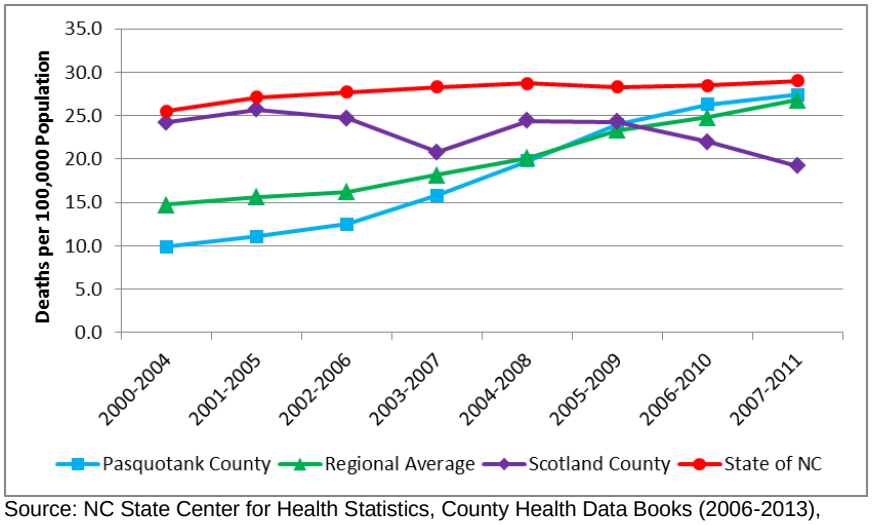
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Alzheimer's Disease Mortality Rate Trend

Figure 30 displays the Alzheimer's disease mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The Alzheimer's disease mortality rate in Pasquotank County was lower than the comparable rate for NC throughout the interval cited. However, the Pasquotank County rate rose 177% over the period, from 9.9 in 2000-2004 to 27.4 in 2007-2011. Over the same period the NC rate rose 14%, and the Alzheimer's disease mortality rate in Scotland County *fell* 21%.
- Region-wide the Alzheimer's disease mortality rate rose 83%, from 14.7 in 2000-2004 to 26.9 in 2007-2011.

Figure 30. Overall Alzheimer's Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Alzheimer's Disease Mortality

Table 162 presents Alzheimer's disease mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of Alzheimer's disease deaths among most stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the Alzheimer's disease mortality rate was highest statewide and lowest in Scotland County.
- Among African American non-Hispanic persons, the Alzheimer's disease mortality rate was lowest statewide and highest in the region.
- Statewide, the Alzheimer's disease mortality rate is highest among white non-Hispanic persons, followed by African American non-Hispanics, non-Hispanics of other races, and Hispanics.
- Statewide there appeared to be a significant gender difference in Alzheimer's disease mortality with the rate for females significantly higher than the rate for males. There were too many suppressed rates at the county level to make gender comparisons.

Table 162. Race/Ethnicity-Specific and Sex-Specific Alzheimer's Disease Mortality (Single Five-Year Aggregate Period, 2007-2011)

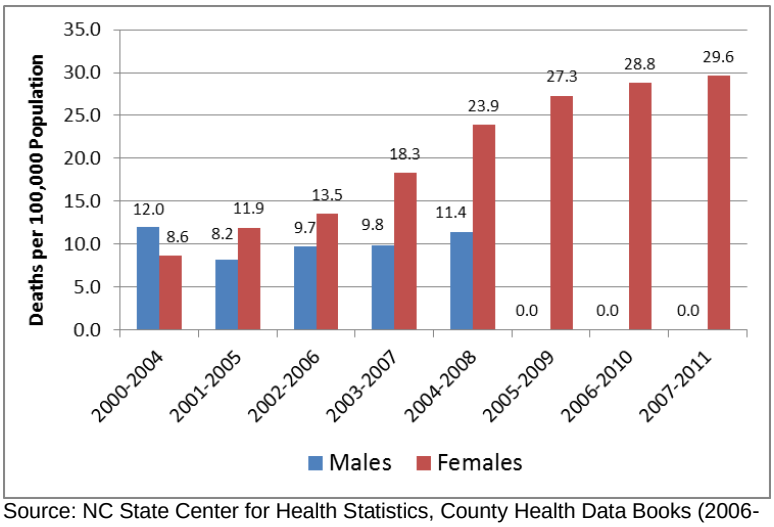
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	43	27.1	20	28.1	0	N/A	1	N/A	17	N/A	47	29.6	64	27.4
Regional Average	20	26.3	10	30.3	0	N/A	0	N/A	9	N/A	21	28.5	30	26.9
Scotland County	23	18.9	9	N/A	4	N/A	0	N/A	3	N/A	33	24.9	36	19.2
State of NC	11,369	29.9	1,789	26.1	136	21.3	53	8.9	3,627	22.7	9,720	32.2	13,347	29.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 31 depicts gender-stratified Alzheimer's disease mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that there may be a large—and growing—gender difference in Alzheimer's mortality rates in Pasquotank County. According to data in the graph, the Alzheimer's disease mortality rate among Pasquotank County females was several times the comparable mortality rate among males. Although all the rates for males were either unstable or suppressed (as indicated by the "zero" plots) due to below-threshold numbers of events, this disproportional pattern of gender-based Alzheimer's disease mortality is common throughout NC.

Figure 31. Sex-Specific Alzheimer's Disease Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of Alzheimer's disease deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the Alzheimer's disease mortality rate in all racial groups was higher among females than males, and higher among whites than minorities. Statewide, the Alzheimer's diseases mortality rate was highest among white non-Hispanic females (33.4), followed by African American non-Hispanic females (28.1), non-Hispanic females of other races (24.9), white non-Hispanic males (23.4), and African American non-Hispanic males (21.2). Alzheimer's disease mortality rates statewide were lowest among female Hispanics (5.9) and non-Hispanic males of other races (15.2). The Alzheimer's disease mortality rate for Hispanic males statewide was suppressed due to a below-threshold number of deaths.

Pneumonia and Influenza

Pneumonia and influenza are diseases of the lungs. Pneumonia is an inflammation of the lungs caused by either bacteria or viruses. Bacterial pneumonia is the most common and serious form of pneumonia and among individuals with suppressed immune systems it may follow influenza or the common cold. Influenza (the "flu") is a contagious infection of the throat, mouth and lungs caused by an airborne virus (64).

Pneumonia/influenza was the seventh leading cause of death in Pasquotank County, the thirteenth in Scotland County, the eleventh region-wide, and the ninth statewide in the 2007-2011 aggregate period (cited previously).

Pneumonia and Influenza Hospitalizations

Table 163 presents hospital discharge rate trend data. According to this data from NC SCHS, pneumonia and influenza generated highly variable hospital discharge rates over the period cited. The highest rates occurred in Scotland County.

Table 163. Pneumonia and Influenza Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	5.2	4.0	3.1	3.2	2.4	2.7	3.3
Regional Average	4.1	3.5	2.6	3.0	2.9	2.7	2.8
Scotland County	6.2	4.6	4.1	4.3	3.5	3.6	4.5
State of NC	4.1	3.7	3.4	3.3	3.5	3.1	3.2

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 133 hospital admissions for pneumonia/influenza among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

The ICD-9 codes for pneumonia are 480-487 and the code for influenza is 488. Table 164 presents data on 2012 hospitalizations of Pasquotank County residents in the region's hospitals for diagnoses in those categories. There were 101 inpatient hospitalizations of Pasquotank County residents in ARHS region hospitals in 2012 with a diagnosis of pneumonia. There were no hospitalizations of Pasquotank County residents in 2012 associated with a diagnosis of influenza.

Table 164. Inpatient Hospitalizations of Pasquotank County Residents for Pneumonia and Influenza, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
480-487	**Pneumonia**	0	2	0	99
488	**Influenza**	0	0	0	0

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 165 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 associated with a diagnosis of pneumonia or influenza. For the period from 2010-2012 there was a total of 772 ED visits to the region's four hospitals by Pasquotank County residents with a diagnosis of pneumonia, and none with a diagnosis of influenza.

Table 165. Emergency Department Admissions of Pasquotank County Residents for Pneumonia and Influenza, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
480-487	**Pneumonia**	166	338	268	772
488	**Influenza**	0	0	0	0

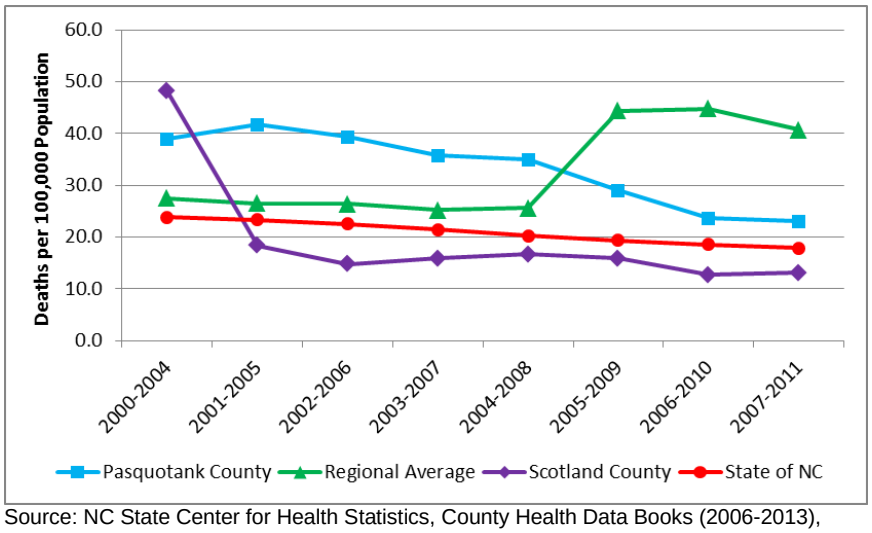
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Pneumonia and Influenza Mortality Rate Trend

Figure 32 displays the pneumonia/influenza mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- Between 2000-2004 and 2007-2011 the pneumonia/influenza mortality rate in Pasquotank County fell 41%, decreasing gradually but steadily from 38.9 to 23.0 between 2000-2004 and 2007-2011.
- The pneumonia/influenza mortality rate in Scotland also fell significantly, although most of the 73% decrease happened between 2000-2004 and 2001-2005.
- Between the 2004-2008 and 2005-2009 aggregate periods the ARHS region experienced a large (73%) increase in the pneumonia/influenza mortality rate, from 25.6 to 44.4. While the increase stopped, the mortality rate in the region remained at the new, higher number.
- At the state level, the pneumonia/influenza mortality rate fell gradually to a current low 17.9.

Figure 32. Overall Pneumonia and Influenza Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Pneumonia and Influenza Mortality

Table 166 presents pneumonia/influenza mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of pneumonia/influenza deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups, so no county-level comparisons are possible.
- At the state level the pneumonia/influenza mortality rate for African American non-Hispanic persons was slightly lower than the rate for white non-Hispanic persons.
- There appeared to be a gender difference in the pneumonia/influenza mortality rate in each jurisdiction with non-suppressed rates, with males suffering the higher rates.

Table 166. Race/Ethnicity-Specific and Sex-Specific Pneumonia and Influenza Mortality (Single Five-Year Aggregate Period, 2007-2011)

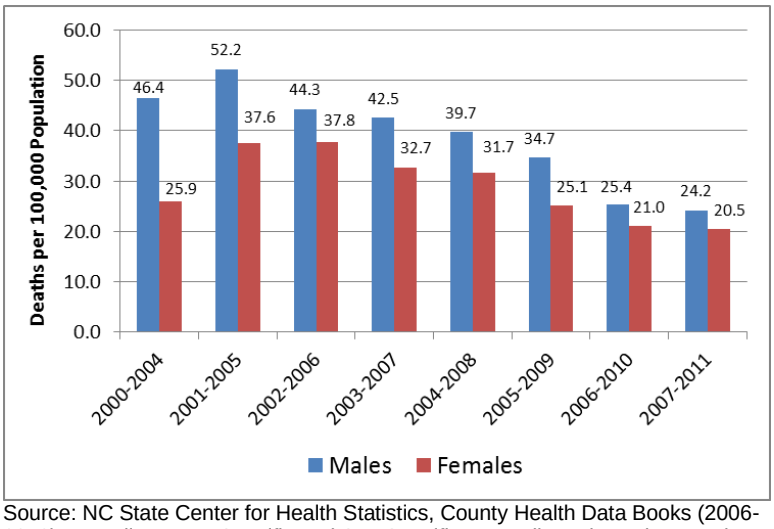
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	34	21.7	18	N/A	0	N/A	1	N/A	21	24.2	32	20.5	53	23.0
Regional Average	21	49.9	8	N/A	0	N/A	0	N/A	13	56.7	16	47.9	30	40.7
Scotland County	8	N/A	14	N/A	3	N/A	1	N/A	15	N/A	11	N/A	26	13.1
State of NC	6,930	18.2	1,377	17.8	83	10.2	65	6.2	3,711	20.9	4,744	16.1	8,455	17.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 33 depicts gender-stratified pneumonia/influenza mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appeared that there has been a long-term gender difference in the pneumonia/influenza mortality rate in Pasquotank County. According to this data, the mortality rate for both men and women decreased over time, and the size of the gender difference in mortality narrowed in the two most recent aggregate periods.

Figure 33. Sex-Specific Pneumonia and Influenza Mortality Rate Trend, Pasquotank County
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of pneumonia/influenza deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the pneumonia/influenza mortality rate generally was higher among males than among females in each racial group; among Hispanics, the gender-stratified rates were the same. Statewide, the pneumonia/influenza mortality rate was highest among African American non-Hispanic males (22.9); followed by white non-Hispanic males (20.9), white non-Hispanic females (16.6), African American non-Hispanic females (15.1) and non-Hispanic males of other races (10.5). Pneumonia/influenza mortality rates statewide were lowest among Hispanic males and Hispanic females (both 6.2), and non-Hispanic females of other races (9.9).

Diabetes Mellitus

Diabetes is a disease in which the body's blood glucose levels are too high due to problems with insulin production and/or utilization. Insulin is a hormone that helps glucose get to cells where it is used to produce energy. With Type 1 diabetes, the body does not make insulin. With Type 2 diabetes, the more common type, the body does not make or use insulin well. Without enough insulin, glucose stays in the blood. Over time, having too much glucose in the blood can damage the eyes, kidneys, and nerves. Diabetes can also lead to heart disease, stroke and even the need to remove a limb (65).

Diabetes was the eighth leading cause of death in Pasquotank County, the fifth in Scotland County and the ARHS region, and the seventh leading cause of death statewide in 2007-2011 (cited previously).

Diabetes Mellitus Hospitalizations

Table 167 presents hospital discharge rate trend data for diabetes. The rates for Scotland County were consistently the highest. The rates for Pasquotank County increased in each of the two most recent years cited.

Table 167. Diabetes Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	2.5	1.7	1.3	1.4	1.3	1.5	1.8
Regional Average	1.9	1.7	1.5	1.7	1.2	1.6	1.5
Scotland County	3.1	3.2	4.1	3.2	3.8	3.8	3.4
State of NC	1.8	1.8	1.9	1.8	1.8	1.9	2.0

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 72 hospitalizations for diabetes among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

In ICD-9 coding, diabetes falls in the category Endocrine and Metabolic Diseases (240-279), with a specific ICD-9 Code of 250 for diabetes mellitus. Table 168 presents data on 2012 hospitalizations of Pasquotank County residents for diagnoses of diabetes mellitus. There were 75 hospitalizations at the four ARHS region hospitals for treatment of diabetes among Pasquotank County residents in 2012.

Table 168. Inpatient Hospitalizations of Pasquotank County Residents for Diabetes Mellitus, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
250.0-250.9	**Diabetes mellitus**	0	0	0	75

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 169 presents data on the number of emergency department admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with diabetes. For the period from 2010-2012 there was a total of 427 and an annual average of 142 ED visits to the region's four hospitals by Pasquotank County residents for diagnoses associated with diabetes.

Table 169. Emergency Department Admissions of Pasquotank County Residents for Diabetes Mellitus, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
250.0-250.9	Diabetes mellitus	97	154	176

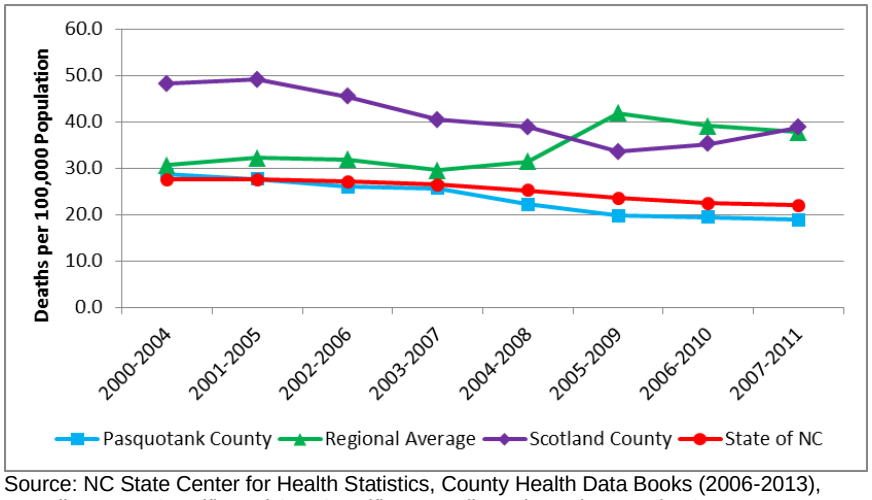
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Diabetes Mellitus Mortality Rate Trend

Figure 34 displays the diabetes mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The diabetes mortality rate in Pasquotank County was the lowest among the four jurisdictions throughout the period cited, and fell 34%, from 28.7 to 18.9 between 2000-2004 and 2007-2011.
- The diabetes mortality rate region-wide increased 23% overall over the period cited.
- The diabetes mortality rates in Scotland County and the state as a whole both decreased 20% over the same period.

Figure 34. Overall Diabetes Mellitus Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Diabetes Mellitus Mortality

Table 170 presents diabetes mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of diabetes deaths among some stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the diabetes mortality rate was highest region-wide and lowest in Pasquotank County. Among African American non-Hispanic persons the rate was highest in Scotland County and lowest in Pasquotank County.
- The diabetes mortality rate was higher among males than among females statewide and region-wide, but not in Scotland County.

Table 170. Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality (Single Five-Year Aggregate Period, 2007-2011)

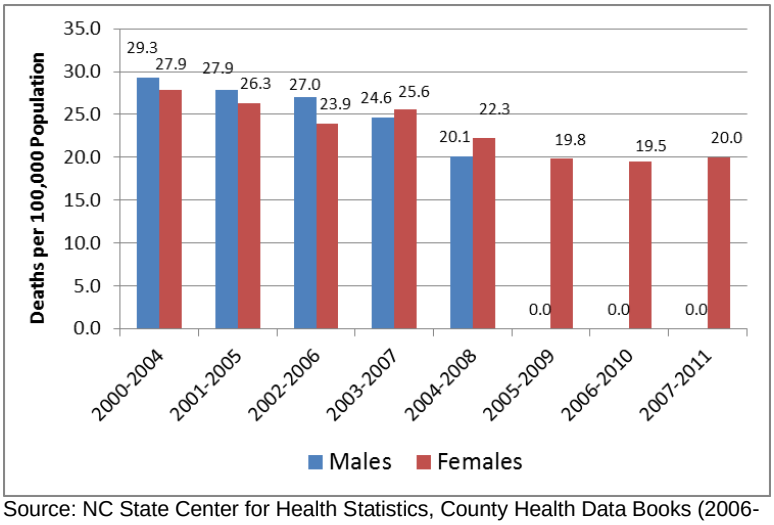
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	21	14.1	21	30.5	0	N/A	0	N/A	15	N/A	27	20.0	42	18.9
Regional Average	15	26.9	16	52.5	0	N/A	0	N/A	14	61.1	18	36.0	31	37.8
Scotland County	27	22.1	45	74.8	5	N/A	0	N/A	30	36.8	47	40.6	77	38.8
State of NC	6,745	17.5	3,681	44.8	217	23.6	90	8.8	5,399	26.0	5,334	18.8	10,733	22.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 35 depicts gender-stratified diabetes mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- Early in the period cited the diabetes mortality rate among Pasquotank County males was higher than the comparable rate among females; this difference may have reversed, but with recent rates for males having been suppressed, it is difficult to know for certain.

Figure 35. Sex-Specific Diabetes Mellitus Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of diabetes deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

Statewide, the diabetes mortality rate was highest among African American non-Hispanic males (50.9); followed by African American non-Hispanic females (40.4), non-Hispanic males of other races (25.7), non-Hispanic females of other races (22.2), and white non-Hispanic males (21.7). Diabetes mortality rates statewide were lowest among Hispanic females (7.0), Hispanic males (11.4) and white non-Hispanic females (14.2).

Nephritis, Nephrotic Syndrome, and Nephrosis

Nephritis refers to inflammation of the kidney, which causes impaired kidney function. Nephritis can be due to a variety of causes, including kidney disease, autoimmune disease, and infection. Nephrotic syndrome refers to a group of symptoms that include protein in the urine, low blood protein levels, high cholesterol levels, high triglyceride levels, and swelling. Nephrosis refers to any degenerative disease of the kidney tubules, the tiny canals that make up much of the substance of the kidney. Nephrosis can be caused by kidney disease, or it may be a complication of another disorder, particularly diabetes (66,67).

This composite set of kidney disorders was the ninth leading cause of death in Pasquotank County and region-wide, the seventh leading cause of death in Scotland County and the eighth statewide in 2007-2011 (cited previously).

Nephritis, Nephrotic Syndrome and Nephrosis Hospitalizations

Table 171 presents the hospital discharge rate trend data for the composite of kidney disorders. According to this data, kidney disease caused a lower rate of hospitalizations in Pasquotank County than statewide every year except 2005.

Table 171. Nephritis, Nephrosis, Nephrotic Syndrome Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	1.8	1.2	1.1	1.4	1.1	1.1	1.7
Regional Average	1.3	1.4	1.3	1.0	1.0	1.2	1.3
Scotland County	1.6	2.2	2.7	2.7	2.0	3.2	3.6
State of NC	1.2	1.3	1.7	1.6	1.4	1.5	1.8

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 68 hospital admissions for nephritis, nephrotic syndrome and nephrosis among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

Diagnoses of nephritis, nephrotic syndrome and nephrosis are coded 580-589 in the ICD-9 system. Table 172 lists inpatient hospitalizations among Pasquotank County residents in these code categories in 2012. There were 74 hospitalizations of Pasquotank County residents region-wide in 2012 for diagnoses associated with nephritis, nephrotic syndrome and nephrosis.

Table 172. Inpatient Hospitalizations of Pasquotank County Residents for Kidney Diseases, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
580-589	Nephritis, nephrotic syndrome, nephrosis	0	0	0	74

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 173 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with kidney diseases. For the period from 2010-2012 there was a total of 24 ED visits to the region's four hospitals by Pasquotank County residents with diagnoses of nephritis, nephrotic syndrome or nephrosis.

Table 173. Emergency Department Admissions of Pasquotank County Residents for Kidney Diseases, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
580-589	Nephritis, nephrotic syndrome, nephrosis	6	7	11	24

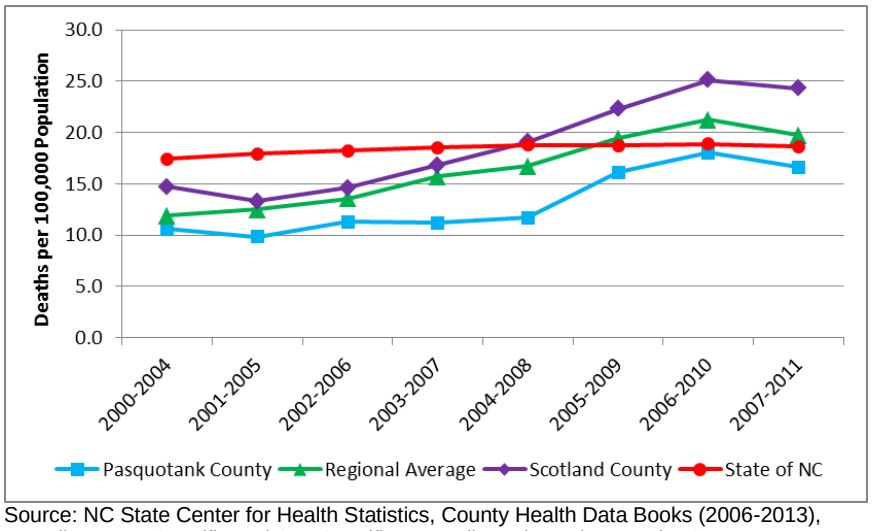
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend

Figure 36 displays the kidney disease mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The kidney disease mortality rate was lowest in Pasquotank County throughout the period cited.
- The kidney disease mortality rate rose over the period cited in every jurisdiction.
- In Pasquotank County the kidney disease mortality rate rose 57% overall, from 10.6 to 16.6, between 2000-2004 and 2007-2011.
- Region-wide the kidney disease mortality rate rose 66%; however, the regional average rate was based on several unstable county rates.
- In Scotland County the kidney disease mortality rate rose 65% over the period cited. In the last three aggregate periods the rate in Scotland County was the highest among the four jurisdictions.
- The kidney disease mortality rate for NC as a whole rose 7% overall between 2000-2004 and 2007-2011.

Figure 36. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality

Table 174 presents kidney disease mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of kidney disease deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Among African American non-Hispanic persons, the kidney disease mortality rate was lower in Pasquotank County than in NC.
- Region-wide and statewide, the kidney disease mortality rate among African American non-Hispanic persons was more than twice the rate for white non-Hispanic persons.
- Statewide, the kidney disease mortality rate was significantly higher among males than among females.

Table 174. Race/Ethnicity-Specific and Sex-Specific Nephritis, Nephrotic Syndrome and Nephrosis Mortality (Single Five-Year Aggregate Period, 2007-2011)

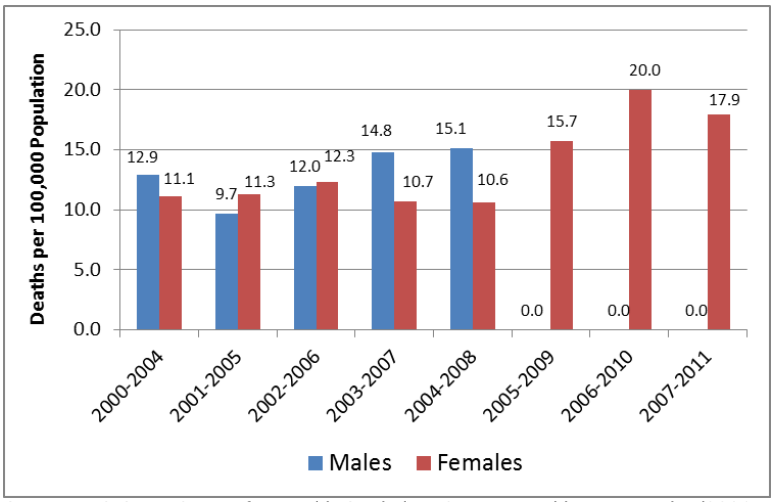
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	20	12.6	17	N/A	1	N/A	1	N/A	12	N/A	27	17.9	39	16.6
Regional Average	10	12.6	9	30.2	0	N/A	0	N/A	9	N/A	10	17.9	19	19.8
Scotland County	17	N/A	30	47.4	1	N/A	0	N/A	20	25.8	28	22.1	48	24.3
State of NC	5,739	15.0	2,921	36.8	143	17.3	57	6.1	4,269	22.7	4,591	16.0	8,860	18.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 37 depicts gender-stratified kidney disease mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- According to the graph, the kidney disease mortality rate among Pasquotank County males appeared to be higher than the comparable rate among Pasquotank County females for most of the time periods shown. However, kidney disease mortality among females increased significantly over the last three periods, so the gender difference may have reversed. It should be noted that while the last three rates for females were stable, all the other gender-stratified kidney disease mortality rates in the graph were either unstable or suppressed.

Figure 37. Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend, Pasquotank County
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of kidney disease deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the nephritis, nephrotic syndrome and nephrosis mortality rate was highest among African American non-Hispanic persons. Statewide, the kidney disease mortality rate was highest among African American non-Hispanic males (41.6); followed by African American non-Hispanic females (33.7), white non-Hispanic males (19.6), non-Hispanic females of other races (17.5), and non-Hispanic males of other races (16.7). Kidney disease mortality rates statewide were lowest among Hispanic females (4.8), Hispanic males (7.7) and white non-Hispanic females (12.2).

Unintentional Motor Vehicle Injury

The NC State Center for Health Statistics distinguishes unintentional motor vehicle injuries from all other injuries when calculating mortality rates and ranking leading causes of death. (Deaths due to all other unintentional injuries will be discussed in a subsequent section of this report.)

Mortality attributable to unintentional motor vehicle injury was the tenth leading cause of death in Pasquotank County, in Scotland County and statewide, and the seventh region-wide for the aggregate period 2007-2011 (cited previously).

Unintentional Motor Vehicle Injury Hospitalizations

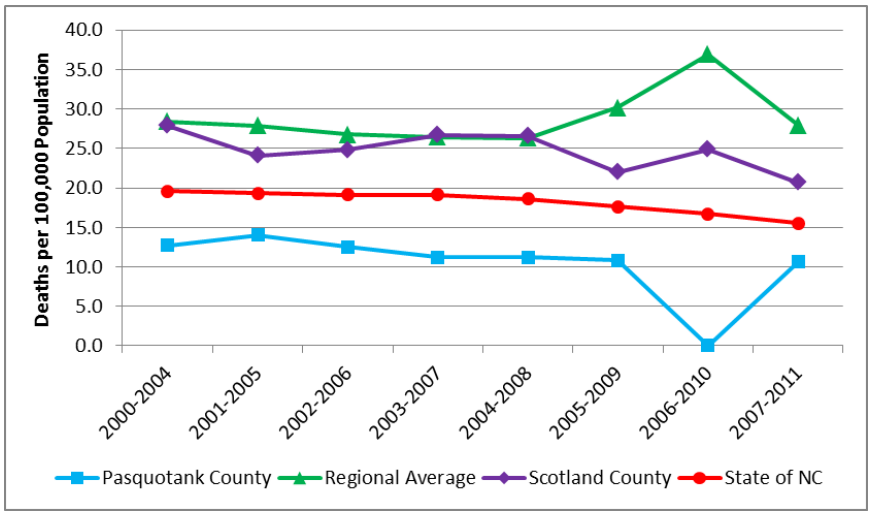
Neither the NC SCHS nor the four regional hospitals participating in this assessment use a diagnosis specific for hospitalizations caused by motor vehicle injury. A previous section of this report discussed all other unintentional injuries (i.e., non-motor vehicle injuries), and listed mortality, hospitalizations and ED visits in the category *Injuries and Poisoning,* which included injuries due to motor vehicle crashes as well as all other unintentional injuries.

Unintentional Motor Vehicle Injury Mortality Rate Trend

Figure 38 displays the unintentional motor vehicle injury mortality rate trend over time.

- The unintentional motor vehicle injury mortality rate in Pasquotank County was the lowest among all throughout the period cited.
- The unintentional motor vehicle injury mortality rate in Pasquotank County fell 17% between 2000-2004 and 2007-2011. Note that the "zero" data point for 2006-2010 represents a suppressed rate, not a true value of zero.
- At the state level, the unintentional motor vehicle injury mortality rate fell 21% over the period cited.

Figure 38. Unintentional Motor Vehicle Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Unintentional Motor Vehicle Injury Mortality

Table 175 presents unintentional motor vehicle injury mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of unintentional motor vehicle injury deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups, leaving little data to compare.
- Among white non-Hispanic persons, the unintentional motor vehicle injury mortality rate was higher across the ARHS region than statewide.
- The rates for African American non-Hispanics and white non-Hispanics statewide were nearly the same, but across the ARHS region the rate for African American non-Hispanics was 56% higher than the comparable regional rate for white non-Hispanics. Note, however, that the regional rates likely are unstable.
- Statewide, the unintentional motor vehicle injury rate for males was 2.7 *times* the comparable rate for females.

Table 175. Race/Ethnicity-Specific and Sex-Specific Unintentional Motor Vehicle Injury Mortality
(Single Five-Year Aggregate Period, 2007-2011)

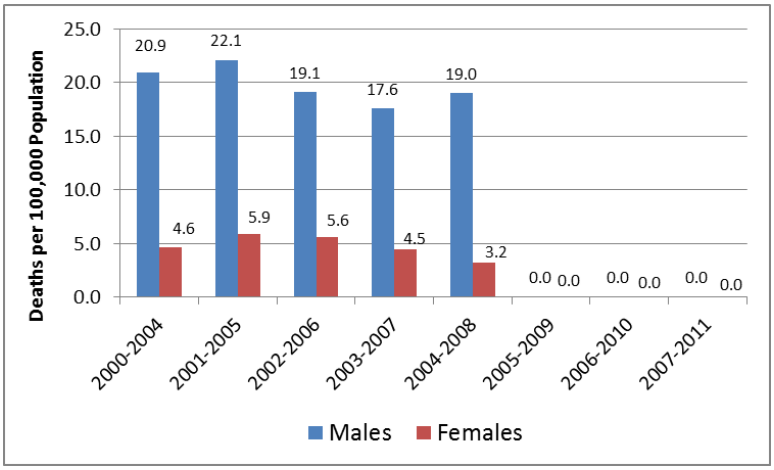
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	14	N/A	8	N/A	0	N/A	1	N/A	18	N/A	5	N/A	23	10.6
Regional Average	12	26.5	8	41.3	0	N/A	0	N/A	16	54.2	4	N/A	20	27.9
Scotland County	20	24.3	9	N/A	7	N/A	0	N/A	25	30.4	11	N/A	36	20.7
State of NC	5,011	15.5	1,547	15.3	236	14.9	542	14.3	5,222	22.9	2,114	8.6	7,336	15.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 39 depicts gender-stratified unintentional motor vehicle injury mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- The unintentional motor vehicle injury mortality rate among males in the county was, on occasion, almost six times the comparable rate for females. Note, however, that all of the rates for females were either unstable or suppressed (as indicated by “0”), due to below-threshold numbers of deaths. And for males, only the rate for 2001-2005 was stable.

Figure 39. Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Table 176 presents unintentional motor vehicle injury mortality rate data fully stratified by gender and race/ethnicity for the period 2007-2011.

- Because of below-threshold numbers of unintentional motor vehicle injury deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates.
- Region-wide, the unintentional motor vehicle injury mortality rate for African American non-Hispanic males was 53% higher than the comparable rate for white non-Hispanic males. Note, however, that the regional average should be considered unstable.
- At the state level, the unintentional motor vehicle injury mortality rate in all racial groups was higher among males than females.

Table 176. Race/Ethnicity and Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate (Single Five-Year Aggregate Period, 2007-2011)

Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	14	N/A	8	N/A	0	N/A	1	N/A	18	N/A	5	N/A	23	10.6
Regional Average	12	26.5	8	41.3	0	N/A	0	N/A	16	54.2	4	N/A	20	27.9
Scotland County	20	24.3	9	N/A	7	N/A	0	N/A	25	30.4	11	N/A	36	20.7
State of NC	5,011	15.5	1,547	15.3	236	14.9	542	14.3	5,222	22.9	2,114	8.6	7,336	15.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Age Disparities in Motor Vehicle Injury Mortality

The unintentional motor vehicle injury mortality rate has a strong age component.

Table 177 presents unintentional motor vehicle injury mortality data, stratified by age group. Note that this data is *not* age-adjusted.

- Statewide, the 20-39 age group has the highest motor vehicle injury mortality rate (21.1), followed by the 40-64 age group (16.0).
- Each county had a different pattern of age disparity in motor vehicle injury mortality. In Pasquotank County the highest mortality rate was in the 40-65 age group, followed by the 20-39 age group. In Scotland County, the highest mortality rate was in the 0-19 age group, followed by the 20-39 age group. Mortality region-wide followed the state pattern.
- Note that most of the age-stratified mortality rates in the local jurisdictions were unstable.

Table 177. Motor Vehicle Injury Mortality, Numbers and Rates, by Age (Five-Year Aggregate Period, 2007-2011)

Location	Number of Deaths and Unadjusted Death Rates per 100,000 Population							
	All Ages		0-19		20-39		40-64	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	23	11.2	**3**	**5.4**	**6**	**10.5**	**10**	**15.5**
Regional Average	**23**	**24.5**	**3**	**15.3**	**7**	**32.7**	**8**	**23.7**
Scotland County	n/a	n/a	**5**	**97.0**	**16**	**35.9**	**11**	**18.0**
State of NC	7,336	15.6	1,005	7.9	2,694	21.1	2,474	16.0

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, 2013 County Health Databook, Death Counts and Crude Death Rates per 100,000 Population for Leading Causes of Death, by Age Groups, NC 2007-2011; http://www.schs.state.nc.us/SCHS/data/databook/.

Alcohol-Related Traffic Crashes

Table 178 presents several years of data on the proportion of traffic crashes that were alcohol-related.

- In all four jurisdictions the percent of alcohol-related crashes varied over time without a clear pattern.
- In Pasquotank County the six-year average of alcohol-related traffic crashes was 5.2%. Region-wide the comparable average was 5.7%, in Scotland County it was 7.0%, and in NC it was 5.3%

Table 178. Alcohol-Related Traffic Crashes Trend
(Single Years, 2006-2011)

Location	2006			2007			2008			2009			2010			2011		
	Total Crashes			Total Crashes			Total Crashes			Total Crashes			Total Crashes			Total Crashes		
	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes
Pasquotank County	827	47	5.7	814	43	5.3	756	35	4.6	821	50	6.1	709	31	4.4	790	41	5.2
Regional Average	363	22	5.9	360	23	6.5	345	18	5.2	367	21	5.8	348	20	5.7	347	18	5.1
Scotland County	611	45	7.4	606	35	5.8	567	42	7.4	559	45	8.1	633	43	6.8	575	38	6.6
State of NC	220,307	11,336	5.1	224,307	11,778	5.3	214,358	11,982	5.6	209,695	11,384	5.4	213,573	10,696	5.0	208,509	10,708	5.1
Source	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2

Note: statistical information for North Carolina Alcohol Facts was obtained from the NC Administrative Office of the Courts (AOC) and the NC Division of Motor Vehicles (DMV) for the years 2000 through 2011 (single years).
Note: Percentages appearing in **bold** type are based on fewer than 10 alcohol-related crashes per year. Such figures are likely unstable and should be interpreted with caution.
1 - UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2006-2011); http://www.hsrc.unc.edu/ncaf/crashes.cfm.
2 - Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

Table 179 presents detail on the outcomes of alcohol-related crashes in 2011.

- In 2011 in Pasquotank County 5.2% of all crashes, 4.1% of all property damage only crashes, 7.2% of non-fatal crashes, and 12.5% of all fatal crashes were alcohol-related. Note however, that the figure for percent of alcohol-related fatal crashes was based on one death, and may be unstable.
- Statewide in 2011 5.1% of all crashes, 3.5% of all property damage only crashes, 8.1% of all non-fatal crashes, and 32.6% of fatal crashes were alcohol-related.

Table 179. Outcomes of Alcohol-Related Traffic Crashes (2011)

Location	Total Crashes			Property Damage Only Crashes			Non-Fatal Crashes			Fatal Crashes		
	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes	# Reportable Crashes	# Alcohol-Related Crashes	% Alcohol-Related Crashes
Pasquotank County	790	41	5.2	532	22	4.1	250	18	7.2	8	1	12.5
Regional Average	347	18	5.0	236	8	2.9	108	9	9.0	3	1	28.9
Scotland County	575	38	6.6	347	19	5.5	226	19	8.4	2	0	0.0
State of NC	208,509	10,708	5.1	139,404	4,845	3.5	67,983	5,497	8.1	1,122	366	32.6
Source	1	1	2	1	1	2	1	1	2	1	1	2

Note: statistical information for North Carolina Alcohol Facts was obtained from the NC Administrative Office of the Courts (AOC) and the NC Division of Motor Vehicles (DMV) for the years 2000 through 2011 (single years).
Note: Percentages appearing in **bold** type are based on fewer than 10 alcohol-related crashes per year. Such figures are likely unstable and should be interpreted with caution.
1 - UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2006-2011); http://www.hsrc.unc.edu/ncaf/crashes.cfm.
2 - Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

Pedestrian and Bicycle Crashes

The NC Department of Transportation, Division of Bicycle and Pedestrian Transportation maintains data on the character of crashes involving cars and bicycles and cars and pedestrians.

Table 180 displays data on automobile/pedestrian crashes in Pasquotank County over the period from 2006-2010.

- There were all together 47 automobile/pedestrian crashes during the period.
- The most common location for automobile/pedestrian crashes (25 of 47, or 53%) was non-intersection sites.
- The most common type of automobile/pedestrian crash involved a pedestrian who failed to yield (10 of 47, or 21%).
- The motorists in automobile/pedestrian crashes were most frequently in the 40-49 age group (10 of 47, or 21%).
- The pedestrians in automobile/pedestrian crashes were most frequently in the 21-25 age group (9 of 47, or 19%).
- Excessive speed was indicated in only 1 of 47 crashes, or 2%.
- Eleven of the 47 crashes (23%) were deemed hit-and-run.
- The motorist was at fault in 9% of crashes (4 of 47) and the pedestrian was at fault in 13% of crashes (6 of 47). However, fault could not be determined or was otherwise unknown in 78% of crashes (37 of 47).

Table 180. Automobile/Pedestrian Crashes, Pasquotank County (2006-2010)

Parameter	2006	2007	2008	2009	2010	Total
Crash Location						
Intersection	1	4	4	2	0	11
Intersection-Related	0	0	0	1	1	2
Non-Intersection	4	4	7	3	7	25
Non-Roadway	1	1	3	3	1	9
Total	6	9	14	9	9	47
Crash Type						
Backing Vehicle - Driveway / Sidewalk Intersection	0	1	0	0	0	1
Backing Vehicle - Other / Unknown	0	0	1	0	0	1
Backing Vehicle - Parking Lot	0	0	1	2	0	3
Backing Vehicle - Roadway	0	0	1	0	0	1
Crossing an Expressway	0	0	0	0	1	1
Dart-Out	0	1	0	2	0	3
Dash	1	1	1	0	0	3
Disabled Vehicle-Related	0	0	0	0	1	1
Dispute-Related	1	0	1	0	0	2
Motor Vehicle Loss of Control	0	0	1	0	1	2
Motorist Failed to Yield	0	1	0	1	0	2
Motorist Right Turn - Perpendicular Paths	0	0	0	1	0	1
Motorist Turn / Merge - Other / Unknown	0	0	1	0	0	1
Multiple Threat	0	0	0	1	0	1
Off Roadway - Other / Unknown	0	0	1	0	0	1
Off Roadway - Parking Lot	0	1	0	1	0	2
Pedestrian Failed to Yield	2	1	3	0	4	10
Pedestrian on Vehicle	1	0	1	0	0	2
Play Vehicle-Related	0	0	0	1	0	1
Vehicle-Vehicle / Object	1	0	1	0	1	3
Walking Along Roadway Against Traffic - From Front	0	1	1	0	0	2
Walking in Roadway	0	2	0	0	1	3
Total	6	9	14	9	9	47
Driver Age Group						
0-19	1	0	2	1	1	5
20-24	0	0	3	1	2	6
25-29	1	1	0	0	1	3
30-39	0	0	1	2	1	4
40-49	1	3	3	1	2	10
50-59	0	0	1	1	1	3
60-69	0	0	3	2	0	5
70+	1	0	0	1	0	2
Unknown	2	5	1	0	1	9
Total	6	9	14	9	9	47
Pedestrian Age Group						
0-5	1	1	2	0	0	4
6-10	0	0	0	2	0	2
11-15	0	0	1	0	1	2
16-20	0	2	2	1	1	6
21-25	1	2	3	1	2	9
26-30	0	2	1	0	0	3
31-40	2	2	1	1	1	7
41-50	2	0	2	1	0	5
51-60	0	0	1	0	1	2
61-70	0	0	1	2	0	3
71+	0	0	0	1	2	3
Unknown	0	0	0	0	1	1
Total	6	9	14	9	9	47

Table 180. Automobile/Pedestrian Crashes, Pasquotank County (2006-2010) (Continued)

Parameter	2006	2007	2008	2009	2010	Total
Excessive Speed Indicated						
No	6	8	14	9	9	46
Yes	0	1	0	0	0	1
Total	6	9	14	9	9	47
Hit and Run						
No	4	4	12	8	8	36
Yes	2	5	2	1	1	11
Total	6	9	14	9	9	47
Fault						
Motorist at Fault	1	3	0	0	0	4
Pedestrian at Fault	3	3	0	0	0	6
Unknown	2	3	0	0	0	5
Fault Not Coded	0	0	14	9	9	32
Total	6	9	14	9	9	47

Source: NC Department of Transportation, Division of Bicycle and Pedestrian Transportation, Research and Reports, Crash Data Tool, Pedestrian Crash Data; http://www.pedbikeinfo.org/pbcat/_pedquery.cfm.

Table 181 displays data on automobile/bicycle crashes in Pasquotank County in the period from 2006-2010.

- There were all together35 automobile/bicycle crashes in Pasquotank County during the period.
- The most common location for automobile/bicycle crashes (20 of 35, or 57%) was non-intersection sites.
- The most common type of automobile/bicycle crash involved a motorist making a left turn against a bicyclist coming in the opposite direction (4 of 35, or 11%).
- The motorists in automobile/bicycle crashes were most frequently in the 30-39 age group (8 of 35, or 23%).
- The cyclists in automobile/bicycle crashes were most frequently in the 40-49 age group (9 of 35, or 26%).
- Excessive speed was not indicated in any of the 35 crashes.
- Three of the 35 automobile/bicycle crashes (9%) were deemed hit-and-run.
- The motorist was at fault in 14% (5 of 35) of automobile/bicycle crashes, and cyclists were deemed at fault in 17% (6 of 35). However, fault was not coded or was otherwise unknown in 69% of crashes (24 of 35).

Table 181. Automobile/Bicycle Crashes, Pasquotank County (2006-2010)

Parameter	2006	2007	2008	2009	2010	Total
Crash Location						
Intersection	1	5	1	6	1	14
Intersection-Related	0	0	0	1	0	1
Non-Intersection	1	6	7	2	4	20
Total	2	11	8	9	5	35

Table 181. Automobile/Bicycle Crashes, Pasquotank County (2006-2010) (Continued)

Parameter	2006	2007	2008	2009	2010	Total
Crash Type						
Bicyclist Failed to Clear - Unknown	0	0	0	1	0	1
Bicyclist Left Turn - Opposite Direction	0	0	1	0	0	1
Bicyclist Left Turn - Same Direction	0	0	1	0	1	2
Bicyclist Ride Out - Other Midblock	0	0	2	1	0	3
Bicyclist Ride Out - Parallel Path	0	2	0	0	0	2
Bicyclist Ride Out - Sign-Controlled Intersection	0	1	0	0	0	1
Bicyclist Ride Out - Signalized Intersection	0	0	0	2	0	2
Bicyclist Right Turn - Same Direction	0	1	0	0	0	1
Crossing Paths - Intersection - Other / Unknown	0	0	0	0	1	1
Crossing Paths - Midblock - Other / Unknown	0	0	0	0	1	1
Head-On - Bicyclist	0	0	3	0	0	3
Head-On - Unknown	0	1	0	0	0	1
Motorist Drive Out - Other Midblock	0	0	0	0	1	1
Motorist Drive Out - Sign-Controlled Intersection	0	1	0	0	0	1
Motorist Drive Through - Signalized Intersection	0	1	0	0	0	1
Motorist Left Turn - Opposite Direction	1	2	0	1	0	4
Motorist Overtaking - Misjudged Space	0	1	0	0	0	1
Motorist Overtaking - Other / Unknown	0	0	1	1	1	3
Motorist Overtaking - Undetected Bicyclist	0	1	0	0	0	1
Parallel Paths - Other / Unknown	1	0	0	0	0	1
Signalized Intersection - Other / Unknown	0	0	0	1	0	1
Unknown Approach Paths	0	0	0	2	0	2
Total	2	11	8	9	5	35
Driver Age Group						
0-19	0	2	3	0	1	6
20-24	0	2	1	1	0	4
25-29	0	0	0	1	0	1
30-39	0	2	1	4	1	8
40-49	2	1	0	0	2	5
50-59	0	0	0	2	0	2
60-69	0	1	2	1	0	4
70+	0	1	0	0	1	2
Unknown	0	2	1	0	0	3
Total	2	11	8	9	5	35
Bicyclist Age Group						
6-10	0	1	0	1	0	2
11-15	0	1	4	0	1	6
16-19	1	0	0	0	0	1
20-24	0	0	2	1	1	4
30-39	1	1	1	1	0	4
40-49	0	3	1	4	1	9
50-59	0	3	0	2	1	6
60-69	0	0	0	0	1	1
70+	0	1	0	0	0	1
Unknown	0	1	0	0	0	1
Total	2	11	8	9	5	35
Excessive Speed Indicated						
No	2	11	8	9	5	35
Total	2	11	8	9	5	35
Hit and Run						
No	2	9	7	9	5	32
Yes	0	2	1	0	0	3
Total	2	11	8	9	5	35

Table 181. Automobile/Bicycle Crashes, Pasquotank County (2006-2010) (Continued)

Parameter	2006	2007	2008	2009	2010	Total
Fault						
Motorist at Fault	1	4	0	0	0	5
Bicyclist at Fault	0	6	0	0	0	6
Fault Not Coded	0	0	8	9	5	22
Unknown	1	1	0	0	0	2
Total	2	11	8	9	5	35

Source: NC Department of Transportation, Division of Bicycle and Pedestrian Transportation, Research and Reports, Crash Data Tool, Pedestrian Crash Data; http://www.pedbikeinfo.org/pbcat/_bikequery.cfm.

Septicemia

Septicemia is a rapidly progressing infection resulting from the presence of bacteria in the blood. The disease often arises from other infections throughout the body, such as meningitis, burns, and wound infections. Septicemia can lead to septic shock in which case low blood pressure and low blood flow cause organ failure (68). While septicemia can be community-acquired, some cases are acquired by patients hospitalized initially for other conditions; these are referred to as nosocomial infections. Sepsis is now a preferred term for septicemia, but NC SCHS continues to use the older term.

Septicemia was the eleventh ranked cause of death in Pasquotank County and the state of NC, the twelfth in the region, and the ninth in Scotland County in 2007-2011 (cited previously).

Septicemia Hospitalizations

Table 182 presents the hospital discharge rate trend data for septicemia. According to this data, the septicemia hospitalization discharge rate was highest in Scotland County, followed by the state of NC. The septicemia discharge rate in Pasquotank County doubled between 2010 and 2011.

Table 182. Septicemia Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	1.5	1.0	0.7	0.8	1.2	1.6	3.1
Regional Average	**1.4**	**1.7**	**1.5**	**1.5**	**1.4**	**1.9**	**3.0**
Scotland County	1.3	2.8	4.1	4.2	4.2	3.7	4.2
State of NC	1.6	1.8	2.0	2.3	2.5	2.9	3.4

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were 125 hospital admissions for septicemia among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

The ICD-9 Code for septicemia is 038. Table 183 presents data on 2012 hospitalizations of Pasquotank County residents in the region's hospitals for diagnoses in that category. There were 144 hospitalizations of Pasquotank County residents in ARHS region hospitals in 2012 with a diagnosis of septicemia.

Table 183. Inpatient Hospitalizations of Pasquotank County Residents for Septicemia, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
038	Septicemia	0	2	1	141

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 184 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 associated with a diagnosis of septicemia. For the period from 2010-2012 there was a total of 14 ED visits to the region's four hospitals by Pasquotank County residents with a diagnosis of septicemia.

Table 184. Emergency Department Admissions of Pasquotank County Residents for Septicemia, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
038	Septicemia	4	4	6	14

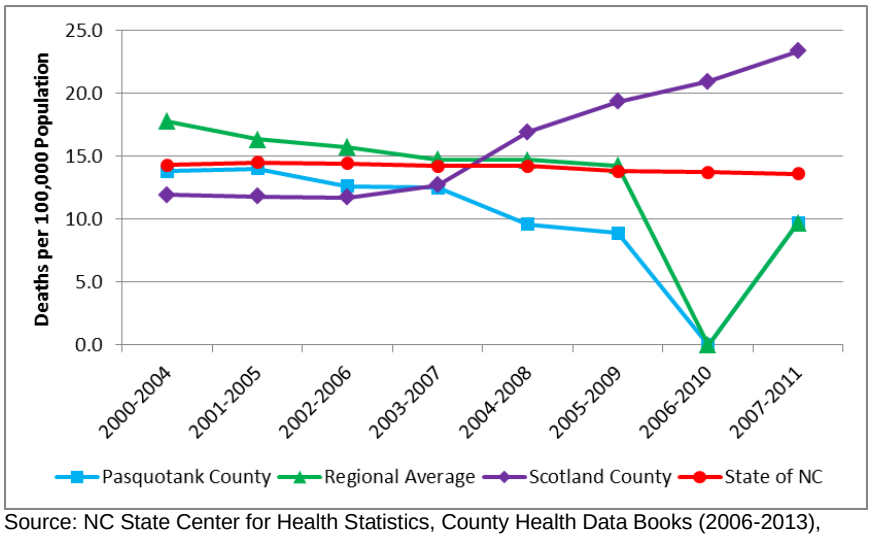
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Septicemia Mortality Rate Trend

Figure 40 displays the septicemia mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The regional septicemia mortality rate was the highest among the four jurisdictions in the first four aggregate periods, and was higher than the state septicemia mortality rate for the first six aggregate periods.
- The septicemia mortality rate in Pasquotank County was the second-lowest for the first three periods and the lowest after that. One Pasquotank County rate (2006-2010) was suppressed, but the others were technically stable.
- The septicemia mortality rate in Pasquotank County fell 30%, from 13.8 in 2000-2004 to 9.7 in 2007-2011.
- The septicemia mortality rate for the region decreased 45% overall in the period cited, while the rate for NC as a whole decreased 5%.
- The septicemia mortality rate in Scotland County increased 96% between 2000-2004 and 2007-2011.

Figure 40. Overall Septicemia Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Septicemia Mortality

Table 185 presents septicemia mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of septicemia disease deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Statewide, the septicemia mortality rate was higher among males than among females, and higher among African American non-Hispanic persons than among white non-Hispanic persons.

Table 183. Race/Ethnicity-Specific and Sex-Specific Septicemia Mortality (Single Five-Year Aggregate Period, 2007-2011)

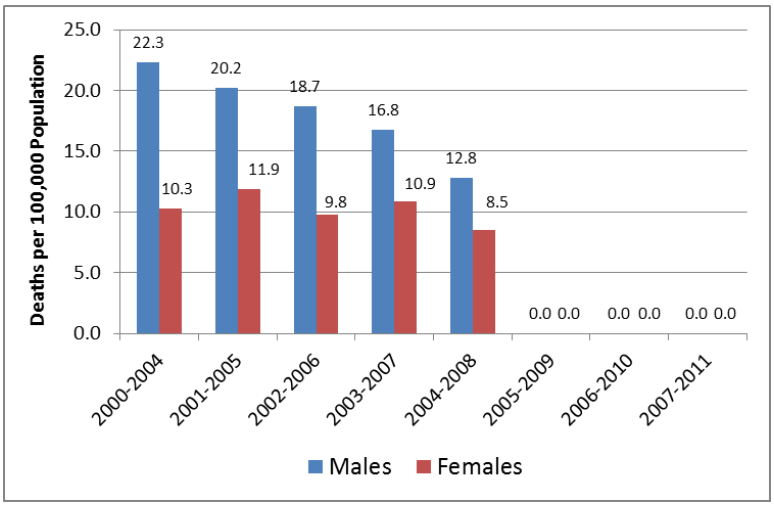
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	19	N/A	3	N/A	0	N/A	0	N/A	9	N/A	13	N/A	22	9.7
Regional Average	9	N/A	5	N/A	0	N/A	0	N/A	7	N/A	7	N/A	14	9.7
Scotland County	24	21.1	16	N/A	3	N/A	0	N/A	19	N/A	24	21.2	43	23.3
State of NC	4,700	12.3	1,662	20.5	82	9.3	71	5.9	2,943	15.0	3,572	12.6	6,515	13.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 41 depicts gender-stratified septicemia mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- According to the graph, the septicemia mortality rate among Pasquotank County males appeared to be higher than the comparable rate among females for all the time periods shown. However, the gap in mortality rates appeared to be shrinking as the mortality rate among Pasquotank County males decreased. It should be noted that all the gender-stratified septicemia mortality rates in the graph were either unstable or suppressed.

Figure 41. Sex-Specific Septicemia Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of septicemia deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the septicemia mortality rate generally was higher among males than among females in each racial group; among Hispanics, that pattern was reversed. Statewide, the septicemia mortality rate was highest among African American non-Hispanic males (24.0); followed by African American non-Hispanic females (18.4), white non-Hispanic males (13.5), white non-Hispanic females (11.4) and non-Hispanic males of other races (10.7). Septicemia mortality rates statewide were lowest among Hispanic males (4.9), Hispanic females (6.5), and non-Hispanic females of other races (8.2).

Chronic Liver Disease and Cirrhosis

Chronic liver disease describes an ongoing disturbance of liver function that causes illness. Liver disease, also referred to as hepatic disease, is a broad term that covers all the potential problems that cause the liver to fail to perform its designated functions. Usually, more than 75% or three quarters of liver tissue needs to be affected before decrease in function occurs. Cirrhosis is a term that describes permanent scarring of the liver. In cirrhosis, the normal liver cells are replaced by scar tissue that cannot perform any liver function (69).

Chronic liver disease and cirrhosis was an unranked cause of death in Pasquotank County and the ARHS region in 2007-2011 due to below-threshold numbers of deaths. It was ranked the twelfth leading cause of death in Scotland County and the thirteenth statewide in that period (cited previously). It is being discussed here in this report on the basis of causing the next highest number of deaths in Pasquotank County after septicemia.

Chronic Liver Disease and Cirrhosis Hospitalizations

Table 184 presents hospital discharge rate trend data for chronic liver disease and cirrhosis. Note that most of the Pasquotank County rates were unstable. The rate for Scotland County was the highest in most years cited.

Table 184. Chronic Liver Disease and Cirrhosis Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	0.4	**0.2**	**0.2**	0.6	**0.1**	**0.2**	**0.2**
Regional Average	**0.3**	**0.3**	**0.2**	**0.3**	**0.2**	**0.1**	**0.2**
Scotland County	0.4	0.5	0.4	0.6	0.4	0.3	0.3
State of NC	0.3	0.3	0.3	0.3	0.3	0.2	0.2

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there were seven hospital discharges for septicemia among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

The ICD-9 Code for chronic liver disease and cirrhosis is 571, and the code for liver abscess and sequelae of chronic liver disease is 572. Table 185 presents data on 2012 hospitalizations of Pasquotank County residents in the region's hospitals for diagnoses in those categories. There were 19 hospitalizations of Pasquotank County residents region-wide in 2012 for diagnoses associated with chronic liver disease and cirrhosis.

Table 185. Inpatient Hospitalizations of Pasquotank County Residents for Chronic Liver Disease and Cirrhosis and Sequelae, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
571	Chronic liver disease and cirrhosis	0	0	0	7
572	Liver abscesses and sequelae of chronic liver disease	0	0	0	12

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 186 presents data on the number of emergency department (ED) admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with chronic liver disease and cirrhosis. For the period from 2010-2012 there was a total of 23 ED visits to the region's four hospitals by Pasquotank County residents with diagnoses associated with chronic liver disease and cirrhosis.

Table 186. Emergency Department Admissions of Pasquotank County Residents for Chronic Liver Disease and Cirrhosis and Sequelae, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
571	Chronic liver disease and cirrhosis	4	4	3	11
572	Liver abscesses and sequelae of chronic liver disease	2	4	6	12

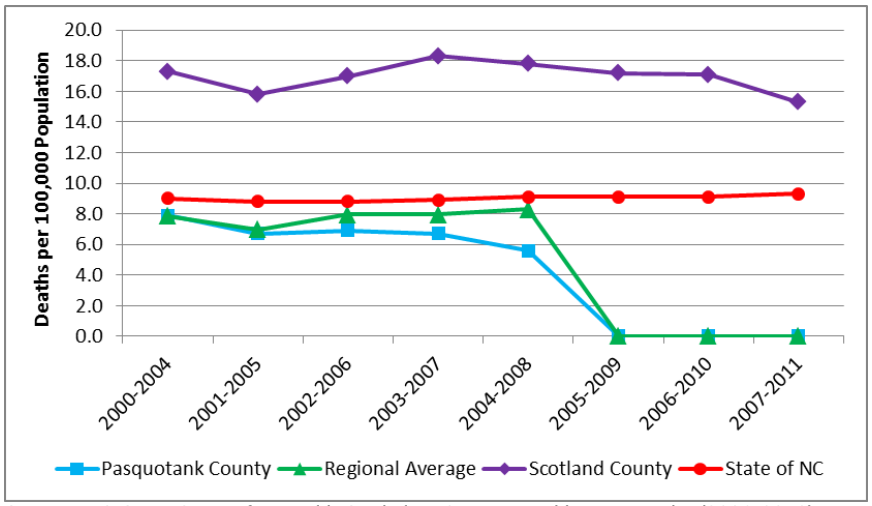
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Chronic Liver Disease and Cirrhosis Mortality Rate Trend

Figure 42 displays the chronic liver disease and cirrhosis mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- All of the chronic liver disease and cirrhosis mortality rates plotted for Pasquotank County or the ARHS region were unstable or suppressed. Given the large number of unstable or suppressed rates detailed comparisons are not warranted.
- The chronic liver disease and cirrhosis mortality rate for Scotland County was the highest throughout the period cited, and usually approximately twice the state rate.
- The chronic liver disease and cirrhosis mortality rate for NC as a whole was essentially unchanged at approximately 9.0 over the period cited.

Figure 42. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality

Table 187 presents chronic liver disease and cirrhosis mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of chronic liver disease and cirrhosis deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Statewide, the chronic liver disease and cirrhosis mortality rate was significantly higher among males than among females, and somewhat higher among white non-Hispanics than among other racial and ethnic groups.

Table 187. Race/Ethnicity-Specific and Sex-Specific Chronic Liver Disease and Cirrhosis Mortality (Single Five-Year Aggregate Period, 2007-2011)

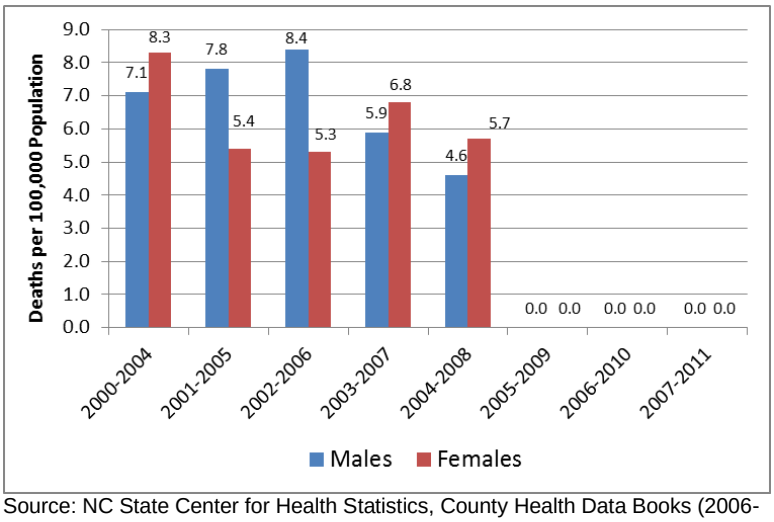
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	15	N/A	4	N/A	0	N/A	0	N/A	10	N/A	9	N/A	19	N/A
Regional Average	8	N/A	3	N/A	0	N/A	0	N/A	8	N/A	3	N/A	11	N/A
Scotland County	16	N/A	8	N/A	6	N/A	0	N/A	19	N/A	11	N/A	30	15.3
State of NC	3,829	9.9	737	7.5	82	6.6	75	5.0	3,122	13.2	1,601	5.9	4,723	9.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 43 depicts gender-stratified chronic liver disease and cirrhosis mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- According to the graph, there was no consistent gender difference in the chronic liver disease and cirrhosis mortality rate in Pasquotank County. It should be noted that all the gender-stratified mortality rates in the graph were either unstable or suppressed.

Figure 43. Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of chronic liver disease and cirrhosis deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the chronic liver disease and cirrhosis mortality rate generally was higher among males than among females in each racial and ethnic group. Statewide, the chronic liver disease and cirrhosis mortality rate was highest among white non-Hispanic males (14.1), followed by African American non-Hispanic males (11.0), non-Hispanic males of other races (7.8), Hispanic males (6.3) and white non-Hispanic females (6.2). Chronic liver disease and cirrhosis mortality rates statewide were lowest among African American non-Hispanic females (4.8), and non-Hispanic females of other races (5.6). The mortality rate for Hispanic females was suppressed due to below-threshold numbers of chronic liver disease and cirrhosis deaths.

Suicide

Suicide was an unranked cause of death in Pasquotank County and Scotland County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the tenth leading cause of death in the ARHS region and twelfth statewide in that period (cited previously). It is being discussed here in this report on the basis of causing the next highest number of deaths in Pasquotank County after chronic liver disease and cirrhosis.

Suicide Hospitalizations

At the present time the NC SCHS does not track hospitalizations related to suicide or attempted suicide.

Hospitals do, however, track a diagnosis called Suicide Ideation, which is coded V62.84 in the ICD-9 system. There were no inpatient hospitalizations of Pasquotank County residents with that ICD-9 code at any of the four ARHS hospitals in 2012. There were, however, 94 emergency department visits by Pasquotank County residents coded for suicide ideation, which are listed in Table 188.

Table 188. Emergency Department Admissions of Pasquotank County Residents for Suicide Ideation, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
V62.84	**Suicide ideation**	34	30	30	94

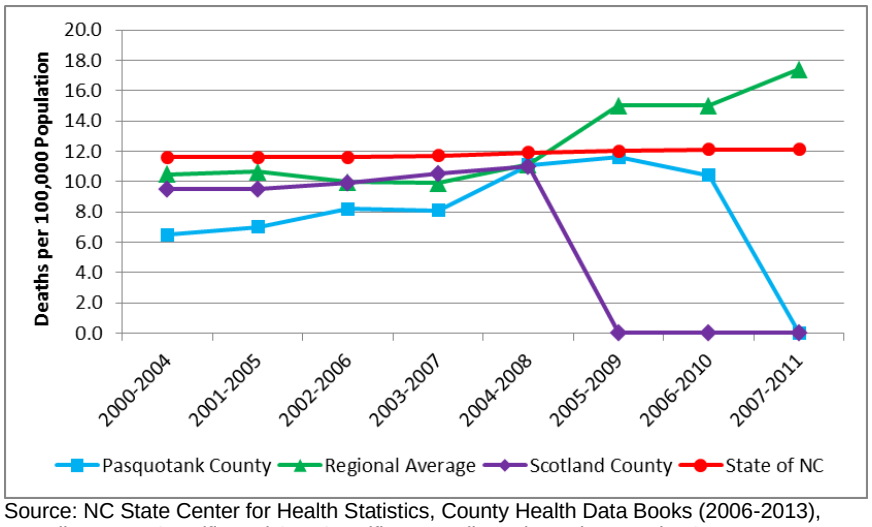
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Suicide Mortality Rate Trend

Figure 44 displays the suicide mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- With the exception of the data points for 2004-2008 through 2006-2010, all the suicide mortality rates for Pasquotank County shown in the graph were unstable or suppressed.
- The suicide mortality rate for the region displayed a prominent increase of 66%, rising from 10.5 in 2000-2004 to 17.4 in 2007-2011. However, since the regional rate represented an average of county rates many of which were themselves unstable, the regional rate likely was unstable as well.
- All the suicide mortality rates for Scotland County were unstable or suppressed.
- The state suicide rate was relatively stable at approximately 11.8 throughout the period cited.

Figure 44. Overall Suicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Suicide Mortality

Table 189 presents suicide mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of suicide deaths among stratified populations in Pasquotank County and elsewhere, mortality rates were suppressed for those groups.
- Statewide there appeared to be a gender-based difference in suicide mortality, with the rate for males over 3½ times the comparable rate for females.

Table 189. Race/Ethnicity-Specific and Sex-Specific Suicide Mortality
(Single Five-Year Aggregate Period, 2007-2011)

Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	14	N/A	1	N/A	0	N/A	1	N/A	9	N/A	7	N/A	16	N/A
Regional Average	9	18.7	1	N/A	0	N/A	0	N/A	8	N/A	2	N/A	10	17.4
Scotland County	8	N/A	2	N/A	0	N/A	0	N/A	7	N/A	3	N/A	10	N/A
State of NC	4,986	15.0	489	4.8	123	7.7	153	4.7	4,446	19.6	1,305	5.3	5,751	12.1

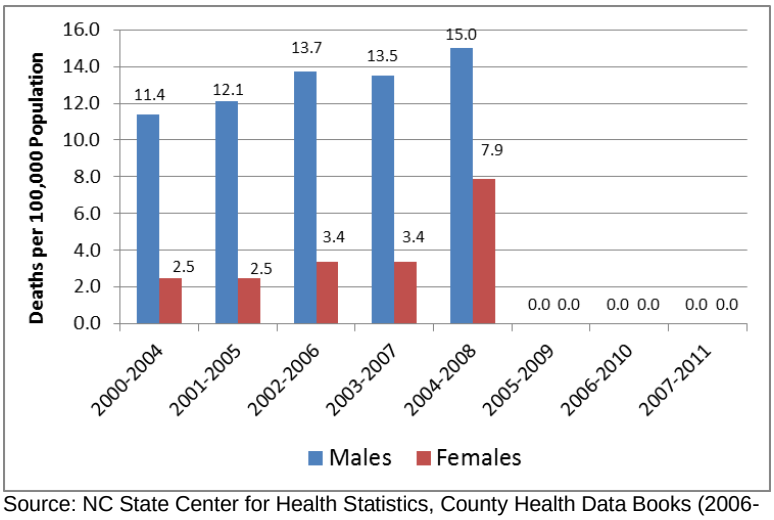
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 45 depicts gender-stratified suicide mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that there was a strong gender difference in the suicide mortality rate in Pasquotank County. The graph demonstrates that the suicide rate among Pasquotank County males was several times the comparable mortality rate among females. Although all the rates for both sexes were either unstable or suppressed due to below-

threshold numbers of deaths, this disproportionate-pattern of gender-based suicide mortality is common throughout NC.

Figure 45. Sex-Specific Suicide Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of suicide deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the suicide mortality rate was higher among males than among females in each racial group. Statewide, the suicide mortality rate was highest among white non-Hispanic males (23.9), followed by non-Hispanic males of other races (11.0), African American non-Hispanic males (8.9), Hispanic males (7.0) and white non-Hispanic females (6.8). Suicide mortality rates statewide were lowest among African American non-Hispanic females (1.4), Hispanic females (1.7) and non-Hispanic females of other races (4.7).

Acquired Immune Deficiency Syndrome (AIDS)

The human immune deficiency virus (HIV) is the virus that causes AIDS. HIV attacks the immune system by destroying CD4 positive (CD4+) T cells, a type of white blood cell that is vital to fighting off infection. The destruction of these cells leaves people infected with HIV vulnerable to other infections, diseases and other complications. The acquired immune deficiency syndrome (AIDS) is the final stage of HIV infection. A person infected with HIV is diagnosed with AIDS when he or she has one or more opportunistic infections, such as pneumonia or tuberculosis, and has a dangerously low number of CD4+ T cells (less than 200 cells per cubic millimeter of blood) (70).

AIDS was an unranked cause of death in Pasquotank County, Scotland County, and the ARHS region in 2007-2011 due to below-threshold numbers of deaths. It was ranked the fifteenth leading cause of death statewide in that period (cited previously). It is being discussed here in this report on the basis of causing the next highest number of deaths in Pasquotank County after suicide.

AIDS Hospitalizations

Table 190 presents hospital discharge rate trend data for AIDS. All the rates for Pasquotank County and most of the rates for the other counties were unstable or suppressed. Statewide, the AIDS hospital discharge was 0.2 for many years, but in 2011 decreased to 0.1.

Table 190. AIDS Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Pasquotank County	**0.2**	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**	**0.0**
Regional Average	**0.4**	**0.3**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**
Scotland County	**0.2**	**0.2**	0.3	0.4	**0.2**	**0.2**	**0.2**
State of NC	0.2	0.2	0.2	0.2	0.2	0.2	0.1

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; http://www.schs.state.nc.us/SCHS/data/databook/.

According to NC SCHS, in 2011 there was one hospitalization for HIV/AIDS among Pasquotank County residents; this figure includes hospitalizations anywhere in NC (59).

In the ICD-9 coding scheme, AIDS falls in the category Infectious and Parasitic Diseases, with the specific code of 042. According to data in Table 191, three residents of Pasquotank County were hospitalized with AIDS in an ARHS region hospital in 2012.

Table 191. Inpatient Hospitalizations of Pasquotank County Residents for AIDS, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
042	**Acquired immune deficiency syndrome**	0	0	0	3

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health.

Table 192 presents data on the number of emergency department admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 associated with a diagnosis of AIDS. For the period from 2010-2012 there was a total of three ED visits to the region's four hospitals by Pasquotank County residents with a diagnosis of AIDS.

Table 192. Emergency Department Admissions of Pasquotank County Residents for AIDS, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
042	Acquired immune deficiency syndrome	2	0	1	3

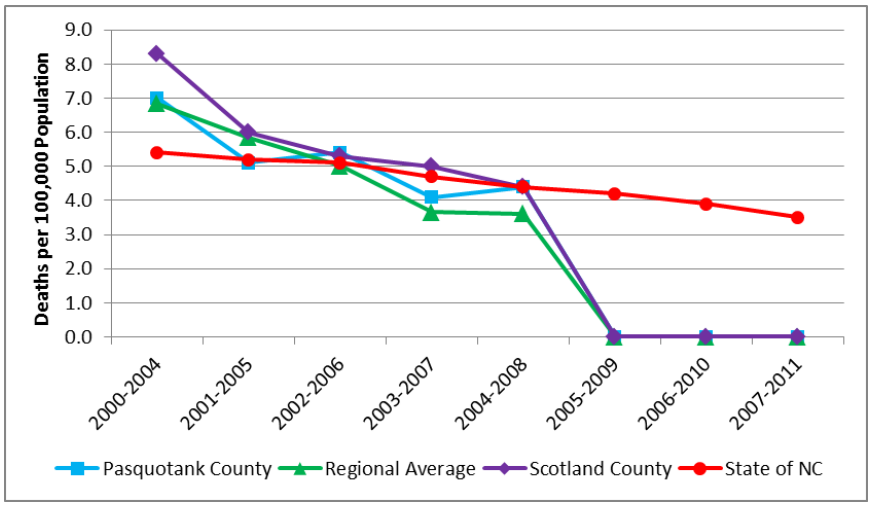
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

AIDS Mortality Rate Trend

Figure 46 displays the AIDS mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The county- and regional level AIDS mortality rates for the entire period cited were unstable or suppressed. Despite the instability, it appeared that the AIDS mortality rate had decreased in both counties and across the region.
- The AIDS mortality rate for NC as a whole decreased 35% (from 5.4 to 3.5) over the period cited.

Figure 46. Overall AIDS Mortality Rate Trend (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in AIDS Mortality

Table 193 presents AIDS mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of AIDS deaths among all stratified populations at the county level, mortality rates were suppressed for those groups.
- Statewide, the AIDS mortality rate was higher among males than among females, and highest among African American non-Hispanic persons.

Table 193. Race/Ethnicity-Specific and Sex-Specific AIDS Mortality (Single Five-Year Aggregate Period, 2007-2011)

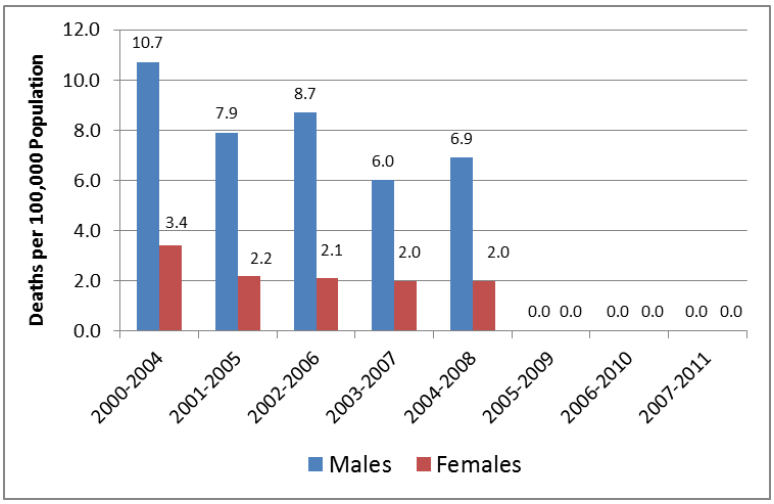
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	2	N/A	7	N/A	0	N/A	0	N/A	6	N/A	3	N/A	9	N/A
Regional Average	1	N/A	3	N/A	0	N/A	0	N/A	3	N/A	1	N/A	4	N/A
Scotland County	2	N/A	7	N/A	1	N/A	0	N/A	7	N/A	3	N/A	10	N/A
State of NC	333	1.0	1,286	12.9	15	N/A	53	2.2	1,141	4.8	546	2.3	1,687	3.5

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 47 depicts gender-stratified AIDS mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- All the AIDS mortality rates shown in the graph were either unstable or suppressed, but the pattern of higher rates for males than for females is common. Noteworthy is the overall decrease in AIDS mortality among the county's males.

Figure 47. Sex-Specific AIDS Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Because of below-threshold numbers of AIDS deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the AIDS mortality rate was highest among African American non-Hispanic males (18.2), followed by African American non-Hispanic females (8.7), Hispanic males (3.4), white non-Hispanic males (1.6) and white non-Hispanic females (0.4). AIDS mortality rates for the remaining three stratified racial and ethnic groups were suppressed due to below-threshold numbers of AIDS deaths.

Homicide

Homicide was an unranked cause of death in Pasquotank County and the ARHS region in 2007-2011 due to below-threshold numbers of deaths. It was ranked the eighth leading cause of death in Scotland County and the fourteenth statewide in that period (cited previously). It is being discussed here in this report on the basis of causing the next highest number of deaths in Pasquotank County after AIDS.

Homicide Hospitalizations

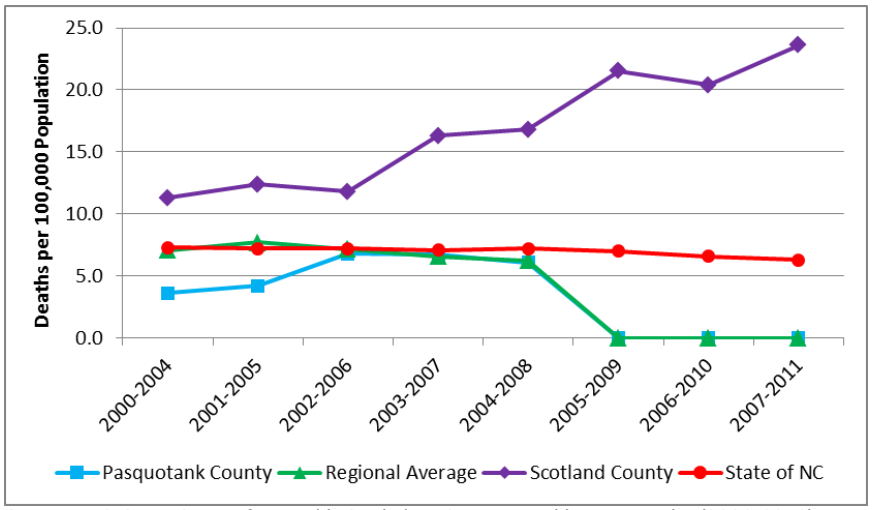
At the present time the NC SCHS does not track hospitalizations related to homicide or attempted homicide. There is an ICD-9 code descriptive of Homicidal Ideation (V62.85), and two Pasquotank County residents were admitted under that code to the emergency department(s) of ARHS area hospitals in the period 2010-2012.

Homicide Mortality Rate Trend

Figure 48 displays the homicide mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The homicide rate in Scotland County was consistently the highest throughout the period cited, and the rate there doubled from 11.3 to 23.6 between 2000-2004 and 2007-2011. All the homicide rates for Scotland County were technically stable.
- The homicide mortality rates in Pasquotank County and the ARHS region appeared to be lower than the comparable rates for Scotland County and the state during most of the period for which there are measured rates. It should be noted, however, that all the Pasquotank County or region-level homicide rates were either unstable or suppressed.
- At the state level, the homicide rate decreased 14% over the period cited.

Figure 48. Overall Homicide Mortality Rate Trend
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Gender and Racial Disparities in Homicide Mortality

Table 194 presents homicide mortality data for the period 2007-2011, stratified by race and sex.

- Note that due to below-threshold numbers of homicide deaths among stratified populations at the county level, all mortality rates were suppressed for those groups.
- Statewide, there appeared to be a gender-based difference in homicide mortality, with the rate for males over three times the comparable rate for females.

Table 194. Race/Ethnicity-Specific and Sex-Specific Homicide Mortality (Single Five-Year Aggregate Period, 2007-2011)

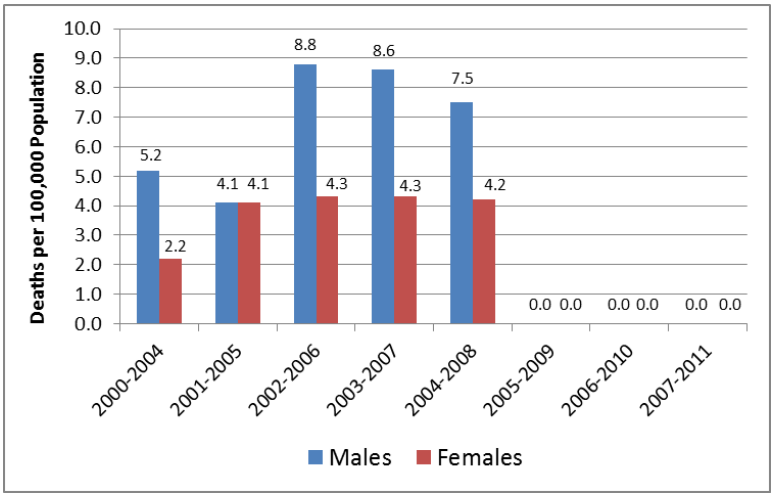
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Pasquotank County	3	N/A	5	N/A	0	N/A	0	N/A	4	N/A	4	N/A	8	N/A
Regional Average	1	N/A	2	N/A	0	N/A	0	N/A	2	N/A	2	N/A	4	N/A
Scotland County	11	N/A	27	40.1	3	N/A	0	N/A	34	39.9	7	N/A	41	23.6
State of NC	1,064	3.4	1,458	13.8	135	8.0	292	7.3	2,253	9.8	696	2.9	2,949	6.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/.

Figure 49 depicts gender-stratified homicide mortality rates in Pasquotank County for the aggregate periods 2000-2004 through 2007-2011.

- Although all the rates for both sexes were either unstable or suppressed due to below-threshold numbers of events, the disproportional gender-based pattern of homicide mortality depicted in the graph—a mortality rate higher among males—is common throughout NC.

Figure 49. Sex-Specific Homicide Mortality Rate Trend, Pasquotank County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; http://www.schs.state.nc.us/SCHS/data/databook/

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Because of below-threshold numbers of homicide deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the homicide mortality rate was highest among African American non-Hispanic males (23.9), followed by non-Hispanic males of other races (13.0), Hispanic males (11.6), African American non-Hispanic females (4.7) and white non-Hispanic males (4.5). Homicide mortality rates statewide were lowest among Hispanic females (2.0), followed by white non-Hispanic females (2.3) and non-Hispanic females of other races (3.4).

MORBIDITY

Morbidity refers generally to the current presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the living population. In this report, communicable disease (including sexually-transmitted infections), asthma, diabetes, obesity, oral health, and mental health conditions are the topics covered under morbidity.

The parameter most frequently used to describe the current extent of any condition of morbidity in a population is *prevalence*: the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence usually is expressed as a proportion, not a rate, and often represents an estimate rather than a direct count.

Communicable Disease

A communicable disease is a disease transmitted through direct contact with an infected individual or indirectly through a vector.

Sexually Transmitted Infections

The topic of communicable diseases includes sexually transmitted infections (STIs). The STIs of greatest regional interest are chlamydia and gonorrhea. HIV/AIDS is sometimes grouped with STIs, since sexual contact is one mode of HIV transmission. While AIDS, as the final stage of HIV infection, was discussed previously among the leading causes of death, HIV is discussed here as a communicable disease.

Chlamydia

Chlamydia is the most frequently reported bacterial STI in the US, with an estimated 2.8 million new cases reported in each year. Chlamydia cases frequently go undiagnosed and can cause serious problems in men and women, such as penile discharge and infertility respectively, as well as infections in newborn babies of infected mothers (71).

Table 195 presents incidence data (i.e., new cases diagnosed) on chlamydia infections.

- There is considerable variability in the annual incidence rates for chlamydia at the county level, which is not uncommon for an infectious disease (see also disclaimer, below).
- The chlamydia incidence rate in Pasquotank County was well above the comparable NC rate and regional average in every year cited.
- The NC Communicable Disease Branch provides the following disclaimer to this chlamydia incidence data:

  Note: chlamydia case reports represent persons who have a laboratory-confirmed Chlamydial infection. It is important to note that Chlamydial infection is often asymptomatic in both males and females and most cases are detected through screening. Changes in the number of reported cases may be due to changes in screening practices. The disease can cause serious complications in females and a number of screening programs are in place to detect infection in young women. There are no comparable screening programs for young men. For this reason, Chlamydia case reports are always highly biased with respect to gender. The North Carolina STD

Surveillance data system has undergone extensive changes since 2008 when North Carolina implemented North Carolina Electronic Disease Surveillance System (NC ESS). During this transition, Chlamydia morbidity counts for some counties may have been affected. Report totals for 2011 should be considered with this in mind. Reports are summarized by the date received in the Communicable Disease Surveillance Unit office rather than by date of diagnosis.

Table 195. Chlamydia Infection Incidence Trend (2007-2011)

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 population)									
	2007		2008		2009		2010		2011	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Pasquotank County	153	374.8	206	497.1	258	620.5	240	590.2	255	627.1
Regional Average	62	313.1	80	385.1	93	446.8	88	405.3	96	436.4
Scotland County	241	661.6	236	646.9	182	501.5	177	489.5	232	641.6
State Total	30,612	337.7	37,885	409.7	43,734	466.2	42,167	442.2	53,854	564.8

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 7; http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf.

Gonorrhea

Gonorrhea is the second most commonly reported bacterial STI in the US. The highest rates of gonorrhea have been found in African Americans, people 20 to 24 years of age, and women, respectively. In women, gonorrhea can spread into the uterus and fallopian tubes, resulting in pelvic inflammatory disease (PID). PID affects more than one million women in the US every year and can cause tubal pregnancy and infertility in as many as 10 percent of infected women. In addition, some health researchers think gonorrhea adds to the risk of getting HIV infection (72).

Table 196 presents incidence data (i.e., new cases diagnosed) for gonorrhea infections.

- The Scotland County gonorrhea incidence rate was the highest among the four jurisdictions in every aggregate period except the first, when the highest incidence rate was in Pasquotank County.

Table 196. Gonorrhea Infection Incidence Trend (Five-Year Aggregate Periods, 2002-2006 through 2006-2010)

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 population)									
	2002-2006		2003-2007		2004-2008		2005-2009		2006-2010	
	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate
Pasquotank County	599	317.4	572	295.2	556	279.9	606	298.7	584	286.2
Regional Average	218	215.5	209	206.1	202	195.4	207	194.5	195	179.5
Scotland County	512	281.4	592	323.4	582	315.3	595	322.2	572	314.8
State of NC	77,948	182.0	79,244	181.9	79,172	178.4	78,778	174.2	77,867	168.9

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 8; http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf.

Table 197 presents the 2006-2010 racially/ethnically-stratified gonorrhea infection rates for the four jurisdictions.

- In every jurisdiction the highest gonorrhea incidence occurred among the African American non-Hispanic population, in which group the incidence rate was approximately 8 to 11 times the comparable rate among the white non-Hispanic population, depending on jurisdiction.
- Gonorrhea incidence rates for other stratified groups at the local level were unstable.
- Statewide the lowest gonorrhea incidence rates occurred among Hispanics and white non-Hispanic persons.

Table 197. Gonorrhea Infection Incidence Rate, Stratified by Race/Ethnicity (Single Five-Year Aggregate Period, 2006-2010)

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 population)									
	Total		White, Non-Hispanic		African American, Non-Hispanic		Other, Non-Hispanic		Hispanic	
	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate
Pasquotank County	584	286.2	87	74.8	492	623.8	**1**	**29.3**	**4**	**72.3**
Regional Average	195	179.5	34	51.6	158	430.1	0	*39.2*	2	*178.7*
Scotland County	572	314.8	79	88.4	465	666.8	24	121.2	**4**	**140.5**
State Total	77,867	168.9	16,488	52.9	58,041	581.6	1,485	96.7	1,853	54.2

Note: Rates for 5-year aggregates appearing in **bold** type are based on fewer than 20 cases per five year period. Such rates are unstable and should be interpreted with caution.
Note: Regional arithmetic mean rates appearing in *italic* type include more than three unstable county rates. Such mean rates likely are unstable and should be interpreted with caution.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2012). NC Resident Gonorrhea Cases and Rates per 100,000 Population (years and counties as noted): http://www.schs.state.nc.us/schs/data/databook/.

Human Immune Deficiency Virus (HIV)

From the standpoint of traditional incidence rates, the numbers of new HIV cases in small counties like Pasquotank County and its comparators tend to be low and yield extremely variable or suppressible rates. (For example, there were seven new HIV cases in Pasquotank County in the three-year period from 2009-2011.) Instead, Table 198 approximates a *prevalence* estimate for each jurisdiction on the basis of how many persons are living with HIV on a particular date.

- As of December 31, 2011 there were 87 persons with HIV/AIDS living in Pasquotank County.

Table 198. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2011 (By County of Residence)

Location	Number of Living Cases
Pasquotank County	87
Regional Average	37
Scotland County	114
State of NC	26,168

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 1; http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf.

Other Communicable Diseases

Communicable diseases fall in the ICD-9 code category 001-139, Infectious and Parasitic Diseases. Table 199 presents a summary of 2012 inpatient hospitalizations of Pasquotank County residents in the four region hospitals for *selected diagnoses* of infectious and parasitic diseases.

- In 2012 there were 33 hospitalizations among Pasquotank County residents for diagnoses of infectious and parasitic diseases in *selected categories listed below*. The largest proportion of the hospitalizations (17 of 33) was associated with intestinal infectious diseases.

Table 199. Inpatient Hospitalizations of Pasquotank County Residents for Infectious and Parasitic Diseases, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	2012 IP Hospitalizations				
		VBH	VCH	VRCH	AH	Total
001-009	**Intestinal Infectious Diseases**					
003	Salmonella (including food-borne)	0	0	0	4	4
005	Other bacterial food poisoning	0	0	0	1	1
008.4	Other specified bacteria (incl. Staphylococcus)	0	0	0	9	9
008.5	Bacterial enteritis, unspecified	0	0	0	1	1
008.8	Viral enteritis	0	0	0	1	1
009	Ill-defined intestinal infections	0	0	0	1	1
030-041	**Other bacterial diseases**					
034.1	Scarlet fever	0	0	0	1	1
050-059	**Viral diseases generally accompanied by exanthem**					
053	Herpes zoster (incl. shingles)	0	0	0	1	1
054	Herpes simplex	0	0	0	2	2
060-066	**Arthropod-borne viral diseases**					
066.4	West Nile fever	0	0	0	1	1
070-079	**Other diseases due to viruses and chlamydiae**					
070	Viral hepatitis	0	0	0	4	4
080-088	**Rickettsiosis and other arthropod-borne diseases**					
082.0	Rocky Mountain spotted fever	0	0	0	1	1
082.4	Erlichiosis	0	0	0	1	1
090-099	**Syphilis and other venereal diseases**	0	0	0	2	2
110-118	**Mycoses**					
112	Candidiasis	0	0	0	3	3

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health.

Table 200 lists a summary of emergency department visits to all four area hospitals by Pasquotank County residents with diagnoses of infectious and parasitic diseases *in selected categories*. Note that this list includes only common and familiar diagnoses; there are too many diagnoses in total to include them all. The period covered is 2010-2012.

- Among the 52 ED admissions for the intestinal infectious diseases listed, the most common diagnosis (23 cases) was other bacterial food poisoning.
- Among the 319 ED admissions for other bacterial diseases listed, the most common diagnosis (303 cases) was streptococcal sore throat.
- Among the 148 ED admissions for viral diseases generally accompanied by exanthema (rash) listed, the most common diagnosis (77 cases) was *Herpes zoster* (e.g., shingles).

- Of the 365 ED admissions for mycoses (fungal infections) listed, 114 were diagnosed as dermatophytoses (i.e., fungal infections of the skin) and 251 were diagnosed as candidiasis (i.e., yeast infections).

Table 200. Emergency Department Admissions of Pasquotank County Residents for Infectious and Parasitic Diseases, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Emergency Department Visits			
		2010	2011	2012	Total
001-009	**Intestinal Infectious Diseases**				
005	Other bacterial food poisoning	5	5	13	23
008.0	E. coli	0	0	1	1
008.5	Bacterial enteritis, unspecified	1	0	5	6
008.8	Viral enteritis	1	0	5	6
009	Ill-defined intestinal infections	3	6	7	16
030-041	**Other bacterial diseases**				
034.0	Streptococcal sore throat	108	138	57	303
034.1	Scarlet fever	10	3	2	15
041	Bacterial infections in conditions classified elsewhere	0	1	0	1
050-059	**Viral diseases generally accompanied by exanthem**				
052	Chickenpox	2	3	7	12
053	Herpes zoster (incl. shingles)	13	35	29	77
054	Herpes simplex	14	20	25	59
070-079	**Other diseases due to viruses and chlamydiae**				
075	Infectious mononucleosis	5	8	3	16
080-088	**Rickettsiosis and other arthropod-borne diseases**				
082.0	Rocky Mountain spotted fever	1	0	0	1
088.81	Lyme disease	0	2	1	3
090-099	**Syphilis and other venereal diseases**	6	2	3	11
110-118	**Mycoses**				
110	Dermatophytosis	34	45	35	114
112	Candidiasis	55	92	104	251
130-136	**Other infectious and parasitic diseases**				
133.0	Scabies	16	25	39	80

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health.

Asthma

Asthma, a disease that affects the lungs, is one of the most common long-term diseases of children, but adults also can have asthma. Asthma causes wheezing, breathlessness, chest tightness, and coughing at night, early in the morning, or upon exertion. The symptoms result because the sides of the airways in the lungs swell and the airways shrink. Less air gets in and out of the lungs, and mucous naturally produced by the body further clogs the airways. In most cases, the cause of asthma is unknown (although there likely is a hereditary component), and there is no known cure. Asthma can be hard to diagnose (73).

Table 201 presents hospital discharge data for asthma, stratified by age, for the period 2008-2010. (At the present time this is the best measure of asthma prevalence available from NC SCHS.)

- All the county-level data exhibited considerable variability due to varying numbers of asthma cases and resulting unstable rates.
- At the state level, the discharge rate for youth (age 0-14) was from 32% to 54% higher than the discharge rate for all ages.

Table 201. NC Hospital Discharges with a Primary Diagnosis of Asthma, Numbers and Rates per 100,000 (2008-2010)

Location	Discharges, Number and Rate (Discharges per 100,000 Population)											
	2008				2009				2010			
	All Ages		Age 0-14		All Ages		Age 0-14		All Ages		Age 0-14	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Pasquotank County	62	150.0	19	242.7	44	105.1	15	195.2	38	93.5	13	169.6
Regional Average	25	123.0	5	128.2	22	108.4	4	85.4	22	117.2	5	131.7
Scotland County	110	296.8	20	257.6	102	276.2	40	520.2	82	226.8	32	432.4
State of NC	10,644	115.4	2,778	151.9	10,986	117.1	3,228	175.0	10,470	109.8	3,152	166.0

Note: Bold type indicates a likely unstable rate based on a small (fewer than 10) number of cases.
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2010-2013), Morbidity, Asthma Hospital Discharges (Total and Age 10-14) per 100,000 Population (years and counties as noted); http://www.schs.state.nc.us/SCHS/data/databook.

In the ICD-9 system, asthma carries the code 493 and is classified within the broad category, Chronic Obstructive Pulmonary Disease and Allied Conditions (code range of 490-496). Table 202 presents data on 2012 inpatient hospitalizations of Pasquotank County residents for a diagnosis of asthma. There were 48 inpatient hospitalizations at the four ARHS hospitals for treatment of asthma among Pasquotank County residents in 2012.

Table 202. Inpatient Hospitalizations of Pasquotank County Residents for Asthma, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
493	**Asthma**	0	0	0	48

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Table 203 presents data on the number of emergency department admissions of Pasquotank County residents to the four ARHS region hospitals in 2010-2012 for diagnoses associated with asthma. For the period from 2010-2012 there was a total of 1,547 ED visits to the region's four hospitals by Pasquotank County residents for treatment of asthma; this computes to an annual average of 516 visits.

Table 203. Emergency Department Admissions of Pasquotank County Residents for Asthma, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
493	**Asthma**	343	565	639

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Diabetes

Diabetes mellitus, or simply, diabetes, is a group of diseases characterized by high blood glucose levels that result from defects in the body's ability to produce and/or use insulin. Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. There are three major types of diabetes:

Type 1 diabetes results from the body's failure to produce insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" or "juvenile diabetes". *Type 2 diabetes* results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes combined with an absolute insulin deficiency. This form was previously referred to as “non-insulin-dependent diabetes mellitus” or "adult-onset diabetes". The third main form, *gestational diabetes,* occurs when pregnant women without a previous diagnosis of diabetes develop a high blood glucose level. Gestational diabetes is caused by the hormones of pregnancy or a shortage of insulin. Although this form of diabetes usually goes away after the baby is born, a woman who has had it is more likely to develop Type 2 diabetes later in life.

In recent years, medical professionals have begun to diagnose *prediabetes*, a condition in which blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. People with prediabetes are at increased risk for developing Type 2 diabetes and for heart disease and stroke (74).

As discussed previously in the mortality section of this report, diabetes was the eighth leading cause of death in Pasquotank County for the 2007-2011 aggregate period, causing 42 deaths. However, diabetes is a chronic condition, and, as noted above can have multiple significant health effects on its sufferers long before it might cause death.

Table 204 presents estimates of the prevalence of diagnosed diabetes in adults age 20 and older in Pasquotank County and its local comparators (state-level data was not available).

- Scotland County had the highest prevalence of diagnosed diabetes in adults in every year cited.
- The five-year average prevalence in Pasquotank County was 10.8%; the five-year average for the region was 11.4%, and the five-year average for Scotland County was 13.0%.
- In Pasquotank County the prevalence of diabetes increased 6% between 2005 and 2009; regionally the increase was 11%. In Scotland County diabetes prevalence increased 22%.

Table 204. Adult Diagnosed Diabetes Prevalence Estimate Trend (Five Single Years, 2005 through 2009)

Location	Estimated Prevalence, Number and Percent (Age-adjusted)									
	2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%
Pasquotank County	2,989	10.9	3,018	10.5	3,072	10.5	3,190	10.7	3,515	11.6
Regional Average	1,457	11.1	1,502	11.1	1,533	11.3	1,578	11.3	1,718	12.3
Scotland County	3,129	12.0	3,233	12.3	3,530	13.6	3,254	12.4	3,787	14.6
State Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: The prevalence of diagnosed diabetes and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors.
Source: Centers for Disease Control and Prevention, Diabetes Data and Trends, *County Level Estimates of Diagnosed Diabetes - of Adults in North Carolina, 2005-2010;* http://apps.nccd.cdc.gov/ddtstrs/default.aspx.

As noted previously in the discussion of diabetes mortality, in 2012 there were 75 inpatient hospitalizations at area hospitals among Pasquotank County residents for diabetes, and from 2010-2012 there were 427 ED admissions associated with the diagnosis of diabetes.

Obesity

Obesity in Adults

Table 205 presents recent estimates of the prevalence of diagnosed obesity in adults age 20 and older in the three local jurisdictions being compared in this CHA. Comparable state-level data was not available.

- Scotland County had the highest prevalence of diagnosed obesity in adults throughout the period cited. No state-level data was available.
- The five-year average prevalence of adult obesity in Pasquotank County was 31.8%; in Scotland County the five-year average prevalence was 33.7%, and regionally the five-year average prevalence was 31.5%.
- It is noteworthy that the prevalence of diagnosed obesity in adults increased in all three jurisdictions over the period cited. In Pasquotank County, the estimated prevalence of diagnosed obesity in adults increased 10% between 2005 and 2009. The increase region-wide was 13% and in Scotland County the increase was 15%.

Table 205. Adult Diagnosed Obesity Prevalence Estimate Trend (Five Single Years, 2005 through 2009)

Location	Estimated Prevalence, Number and Percent (Age-adjusted)									
	2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%
Pasquotank County	8,325	30.3	9,041	31.6	9,424	32.3	9,414	31.7	10,068	33.3
Regional Average	3,934	29.5	4,207	30.7	4,401	31.9	4,490	32.0	4,730	33.4
Scotland County	8,224	31.4	8,445	32.0	8,818	33.9	9,134	34.9	9,345	36.1
State Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: The prevalence of diagnosed diabetes and selected risk factors by county was estimated using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors.
Source: Centers for Disease Control and Prevention, Obesity Data and Trends, *County Level Estimates of Diagnosed Obesity - of Adults in North Carolina, 2005-2010;* http://apps.nccd.cdc.gov/ddtstrs/default.aspx.

Obesity in Children

The NC Healthy Weight Initiative, using the NC Nutrition and Physical Activity Surveillance System (NC NPASS), collects height and weight measurements from children seen in NC DPH-sponsored WIC and Child Health Clinics, as well as some school-based Health Centers (75). (It is important to note that this data is not necessarily representative of the county-wide population of children.) This data is used to calculate Body Mass Indices (BMIs) in order to gain some insight into the prevalence of childhood obesity. BMI is a calculation relating weight to height by the following formula:

BMI = (weight in kilograms) / (height in meters)

For children, a BMI in the 95th percentile or above is considered “obese” (formerly defined as “overweight”), while BMIs that are between the 85th and 94th percentiles are considered “overweight” (formerly defined as “at risk for overweight”).

Table 206 presents NC NPASS data for children ages 2-4 for the period 2007-2011.

- In Pasquotank County the percent of both overweight and obese 2-4 year olds fluctuated without apparent pattern during the period cited.
- Region-wide between 2008 and 2011 there was a net decrease of 3% in the prevalence of obesity and 2% decrease in the prevalence of overweight among 2-4 year olds in the program.
- At the state-level, there appeared to be a slight increase in the percent of children in the "obese" category, from 15.3% in 2007 to 15.7% in 2011, but the change may not be significant.

Table 206. Prevalence of Obesity and Overweight in Children, Ages 2-4, NC NPASS (2007-2011)

Location	Prevalence of Overweight and Obesity in Children Ages 2-4, by Percent									
	2007		2008		2009		2010		2011	
	Overweight	Obese	Overweight	Obese	Overweight	Obese	Overweight	Obese	Overweight	Obese
Pasquotank County	17.5	15.5	15.2	17.1	13.7	13.7	17.6	15.0	14.2	16.3
Regional Average	14.9	15.2	15.5	17.1	14.0	15.1	15.6	16.2	15.2	16.6
Scotland County	15.3	11.6	16.9	12.8	16.4	13.0	14.1	13.6	14.2	14.4
State of NC	15.7	15.3	16.3	15.4	15.8	15.4	16.1	15.6	16.2	15.7

Note: Figures denoted in **bold** type indicate percentages based on fewer than 10 cases.
Note: NC-NPASS data for children ages 2 to 4 are reflective of the population at 185% of the federal poverty level. Approximately 85 to 95% of the children included in the NC-NPASS sample for ages 2 to 4 are WIC participants. Since children are not eligible to participate in WIC once they become 5 years old, the sample size for NC-NPASS data received from the child health clinics was not adequate to calculate county-specific rates for children age 5 and older.
Source: Eat Smart, Move More, Data on Children and Youth in NC, North Carolina Nutrition and Physical Activity Surveillance System (NC-NPASS), NC-NPASS Data (2005-2011), counties and age groups as noted; http://www.eatsmartmovemorenc.com/Data/ChildAndYouthData.html.

Oral Health

Adult Oral Health

Counties are expected to use data from the annual Behavioral Risk Factor Surveillance System (BRFSS) survey to describe dental problems in the community. In NC, the BRFSS survey results are compiled on the county level only for large jurisdictions or metropolitan areas. Pasquotank County responses are combined among those of 40 other counties in an eastern NC region BRFSS data summary. Consequently, it is necessary to look elsewhere to adequately describe the dental needs of adults in Pasquotank County.

As noted in the Health Resources section of this report the ratio of dentists-to-population in Pasquotank County is low, and is only a handful of dentists in the county that accept Medicaid and/or HealthChoice patients. With resources for dental care in such short supply, it might be expected that county residents would have some difficulty accessing needed dental care.

Sometimes an indicator of a dental care access problem is the frequency with which the local emergency department is used as a dental provider. The ICD-9 Codes 520-525, Diseases of Oral Cavity, Salivary Glands, and Jaws, include diagnoses typically associated with dentistry (e.g., dental caries, gingivitis, periodontitis, tooth loss, etc.). Table 207 lists ED visits to the region's four hospitals in 2010-2012 by Pasquotank County residents for conditions associated with this code category.

- For the three year period 2010-2012, Pasquotank County residents made a total of 2,137 visits (an annual average of 712 visits) to local EDs for attention to dental problems.

Table 207. Emergency Department Admissions of Pasquotank County Residents for Dental Conditions, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
520.6	Disturbance in tooth eruption	2	1	0
520.7	Teething syndrome	7	8	11
521.0	Dental caries	126	251	200
522	Diseases of pulp and periapical tissue	123	109	108
523	Gingival and periodontal disease	15	13	13
524	Dentofacial anomalies, including malocclusion	20	12	8
525	Other diseases of the teeth and supporting structure	285	365	460
Total		578	759	800

Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

A search of the hospital databases revealed the following payers for all ED visits for Pasquotank County residents' dental problems:

- Self-pay covered an annual average of 50% of the ED visits listed
- Medicaid covered an annual average of 27% of those visits
- Medicare covered an annual average of 8% of those visits.

Since cost of dental care can be daunting but is covered for Medicaid-eligible patients, it is interesting to examine the proportion of Medicaid clients who actually receive dental services. Table 208 presents dental service utilization figures for Medicaid clients for SFY2010.

- From this data it appears that Medicaid-eligible persons under the age of 21 in Pasquotank County receive dental services at an 18% higher proportion than Medicaid-eligible persons age 21 and older. The direction, if not the proportion, of difference is the same in the other three jurisdictions.

Table 208. Dental Service Utilization by Medicaid Recipients, by Age Group (SFY2010)

Location	SFY2010					
	<21 Years Old			21+ Years Old		
	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services	# Eligible for Services	# Receiving Services	% Eligibles Receiving Services
Pasquotank County	4,987	1,495	30.0	3,565	904	25.4
Regional Average	2,256	773	34.6	1,716	464	26.5
Scotland County	7,176	3,124	43.5	4,923	1,537	31.2
State Total	1,113,692	541,210	48.6	679,139	214,786	31.6

Source: NC DHHS, NC Division of Medical Assistance, Statistics and Reports, County Specific Snapshots for NC Medicaid Services (2008 and 2011); http://www.ncdhhs.gov/dma/countyreports/index.htm.

Child Oral Health

Each year about 200,000 NC elementary school children participate in dental screenings, also called assessments. Public health dental hygienists screen for tooth decay and other disease conditions in individuals. The hygienists refer children who have dental problems and need dental care to public or private practice dental care professionals (76).

Table 209 presents partial summaries of the screenings conducted in SY2005-2006 through SY2008-2009.

- An average of 94.2% of kindergarteners, and 93.0% of fifth graders in Pasquotank County were screened over the period cited. Statewide, an average of 81.0% of kindergarteners and 76.8% of fifth graders were screened over the same period.
- An average of 25.5% of kindergarteners and 6.3% of fifth graders in Pasquotank County had untreated decay over the period cited. Statewide, an average of 18.8% of kindergarteners and 4.3% of fifth graders had untreated decay over the same period.

Table 209. Child Dental Screening Summary (SY2005-2006 through SY2008-2009)

Location	School Dental Screening Results															
	SY2005-2006				SY2006-2007				SY2007-2008				SY2008-2009			
	Kindergarten		5th Grade		Kindergarten		5th Grade		Kindergarten		5th Grade		Kindergarten		5th Grade	
	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay	% Screened	% Untreated Decay
Pasquotank County	100.0	30.0	96.0	9.0	94.0	28.0	91.0	8.0	91.0	23.0	92.0	4.0	92.0	21.0	93.0	4.0
Regional Average	99.6	29.0	96.7	7.3	95.1	22.9	94.7	5.7	93.3	20.9	95.1	4.3	96.6	21.0	94.4	2.9
Scotland County	98.0	33.0	97.0	7.0	98.0	28.0	95.0	8.0	90.0	32.0	92.0	5.0	95.0	29.0	95.0	5.0
State of NC	82.0	21.0	76.0	5.0	78.0	19.0	81.0	4.0	81.0	18.0	73.0	4.0	83.0	17.0	77.0	4.0

Source: NC DHHS, Oral Health, References and Statistics, School Oral Health Assessments, NC County Level Oral Health Assessment Data by Year (years and counties as noted); http://www.ncdhhs.gov/dph/oralhealth/stats/MeasuringOralHealth.htm.

Mental Health

With the mental health system in the state—and Pasquotank County—still coping with system reform growing pains, mental health merits a closer look.

As previously noted in the Mental Health Services and Facilities section of this report, the unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS).

In 2001, the NC General Assembly passed the Mental Health System Reform Act, which ended the previous system by which quasi-independent local entities such as counties and regional agencies delivered mental health services by directly employing the care providers. The new law essentially privatized mental health services by requiring the governmental local management entities (LMEs) to contract with other public or private providers or provider groups to serve area residents in need of mental health services. The local counties and regions no longer directly controlled the provision of services, but instead were responsible for managing provider contracts (77).

The local management entity serving Pasquotank County (as well as the rest of the ARHS region) is East Carolina Behavioral Health (ECBH), which is headquartered in Greenville, NC.

One goal of mental health reform in NC was to refocus mental health, developmental disabilities and substance abuse care in the community instead of in state mental health facilities. The data below clearly illustrates how utilization of state-level services has diminished.

Mental Health Service Utilization

Table 210 presents an annual summary of the number of persons in each jurisdiction served by LMEs/Area Programs from 2005 through 2010.

- In Pasquotank County the number of persons served by mental health area programs fluctuated from year to year over the period cited, but the number served in 2010 was little changed from the number in 2005. Regionally there was an overall decrease of 7% in the number served over the period cited.
- Statewide, there was a decrease in number of persons served between 2007 and 2008, but the state totals have since recovered near to 2005 levels.

Table 210. Persons Served by Mental Health Area Programs/Local Management Entities (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Pasquotank County	1,690	1,603	1,614	1,693	1,560	1,700
Regional Average	758	724	730	730	733	706
Scotland County	1,959	1,694	1,548	1,930	1,876	1,972
State of NC	337,676	322,397	315,338	306,907	309,155	332,796

Note: The figures in the table represent all clients of a community-based Area Program for mental health, developmental disabilities, and drug and alcohol abuse active at the beginning of the state fiscal year plus all admissions during the year. Also included are persons served in three regional mental health facilities. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. State figures include clients reported to reside out-of-state and sometimes contains individuals of Unknown County of residence.
Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 519); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Since mental health reform in NC, only the most seriously ill mental health patients qualify for treatment at state psychiatric hospitals. The individual must be assessed as meeting the diagnostic criteria for (1) acute schizophrenia and/or other psychotic disorders, (2) acute mood disorders or (3) the combination of both, with or without medical and/or physical complications that are within the parameters of what the state hospital can manage (78).

At the present time, there are three state-operated psychiatric hospitals in NC: Broughton Hospital (Morganton), Central Regional Hospital (Butner), and Cherry Hospital (Goldsboro).

Table 211 presents a summary of the number of persons in each jurisdiction served in NC State Psychiatric Hospitals for the period from 2005 through 2010.

- The number of persons served in state psychiatric hospitals decreased overall over the period cited in every jurisdiction except Scotland County. In Pasquotank County, the net decrease from 2005 to 2010 was 81%; the average for the region decreased 78%, and statewide the net decrease was 61%.

Table 211. Persons Served in NC State Psychiatric Hospitals (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Pasquotank County	119	114	92	46	34	23
Regional Average	41	39	33	18	13	9
Scotland County	34	46	62	50	40	34
State of NC	18,435	18,292	18,498	14,643	9,643	7,188

Note: Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state.
Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 519); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Table 212 presents ED admissions of Pasquotank County residents to the four ARHS region hospitals relative to ICD-9 Codes 290-319, Mental, Behavioral and Neurodevelopmental Disorders for the period 2010-2012. Of specific interest in this case are the numbers of admissions for mental health diagnoses excluding dementias, which were covered in the discussion of Alzheimer's disease in the mortality section of this report. The period covered is 2010-2012.

- In the period cited there was a total of 1,314 ED visits by Pasquotank County residents to area EDs with complaints diagnosed as mental or behavioral disorders. The total computes to an annual average of 438 ED visits. Note that the diagnoses listed are only *some* of those included in the entire category.
- The most commonly diagnosed mental health problem among this patient group was anxiety, dissociative or somatoform disorders, which represented 34% of all the visits listed in the table.

Table 212. Emergency Department Admissions of Pasquotank County Residents for Mental, Behavioral and Neurodevelopmental Disorders, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
290-319	**Mental, Behavioral and Neurodevelopmental Disorders**				
291	Alcohol-induced mental disorders	3	2	4	9
292	Drug-induced mental disorders	6	13	13	32
295	Schizophrenic disorders	36	59	34	129
296	Episodic mood disorders (including bipolar disorder)	54	71	81	206
298	Other nonorganic and unspecified mood disorders	2	36	24	62
300	Anxiety, dissociative and somatoform disorders	120	163	169	452
303	Alcohol dependence syndrome	15	11	21	47
304	Drug dependency	11	13	20	44
305	Non-dependent abuse of drugs	73	70	63	206
311	Depressive disorder, not elsewhere classified	45	30	52	127
Total		365	468	481	1,314

Developmental Disabilities Service Utilization

According to NC MH/DD/SAS, *developmental disability* means a severe, chronic disability of a person which:

a. is attributable to a mental or physical impairment or combination of mental and physical impairments;
b. is manifested before the person attains age 22, unless the disability is caused by a traumatic head injury and is manifested after age 22;
c. is likely to continue indefinitely;
d. results in substantial functional limitations in three or more of the following areas of major life activity: self-care, receptive and expressive language, capacity for independent living, learning, mobility, self-direction and economic self-sufficiency; and
e. reflects the person's need for a combination and sequence of special interdisciplinary, or generic care, treatment, or other services which are of a lifelong or extended duration and are individually planned and coordinated; or
f. when applied to children from birth through four years of age, may be evidenced as a developmental delay (79).

The NC Council on Developmental Disabilities estimated that as of January, 2011 there were over 167,000 persons in NC with a developmental disability (80).

Although community care is preferred where available, the state currently operates three facilities serving the developmentally disabled: Caswell Developmental Center (Kinston), Murdoch Developmental Center (Butner), and J. Iverson Riddle Developmental Center (Morganton).

Table 213 presents a summary of the persons in each jurisdiction served in NC State Developmental Centers for the period from 2005 through 2010.

- The numbers of persons in the three local jurisdictions served in state developmental centers were small and variable, and demonstrated no definitive pattern.
- At the state level, the number of persons served decreased by 37% between 2005 and 2010.

Table 213. Persons Served in NC State Developmental Centers (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Pasquotank County	14	14	5	2	16	16
Regional Average	6	6	1	1	6	6
Scotland County	15	13	11	3	4	5
State of NC	2,172	1,690	1,713	1,409	1,404	1,375

Source: NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services, Statistics and Publications, Reports and Publications, Statistical Reports, Developmental Centers (FY2005-FY2010); http://www.ncdhhs.gov/mhddsas/statspublications/reports/index.htm#statisticalreports.

Substance Abuse Service Utilization

Alcohol and Drugs

There are three state-operated residential alcohol and drug abuse treatment centers (ADATC): the Julian F. Keith ADATC (Black Mountain), the R.J. Blackley ADATC (Butner), and the Walter B. Jones ADATC (Greenville).

Table 214 presents a summary of the persons in each jurisdiction served in NC State ADATC for the period from 2005 through 2010.

- The numbers of persons in the three local jurisdictions served in state alcohol and drug abuse treatment centers were small and variable, and demonstrated no definitive pattern.
- At the state level, the number of persons served increased by 20% between 2005 and 2010.

Table 214. Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Pasquotank County	35	43	22	41	72	33
Regional Average	11	14	9	19	21	13
Scotland County	19	9	16	15	12	7
State of NC	3,732	4,003	3,733	4,284	4,812	4,483

Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state.
Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 518); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

Table 212, cited previously, presented 2010-2012 ED admissions of Pasquotank County residents for certain mental and behavioral health diagnoses. Of specific interest here are the numbers of admissions for alcohol- and drug-related diagnoses.

- In the period cited, there were nine total admissions under ICD-9 Code 291, Alcohol-induced mental disorders, and 32 total admissions under ICD-9 Code 292, Drug-induced mental disorders.
- There also were 47 total admissions under ICD-9 Code 303, Alcohol dependence syndrome, and 44 total admissions under ICD-9 Code 304, Drug dependency.
- There were 206 total admissions under ICD-9 Code 305, Non-dependent abuse of drugs.

Substance Use and Abuse among Youth

Tobacco

While there is no Pasquotank County-specific data on youth tobacco use there is regional data through a youth tobacco survey conducted annually through the NC DPH Tobacco Prevention and Control Branch. Pasquotank County is included among the 37 counties in the Branch's Eastern/Coastal Region (Region 1).

Table 215 presents results of the 2011 NC Youth Tobacco Survey conducted among middle school and high school students in Region 1.

- The data reveal that nearly 20% of current sixth-graders reported having ever used tobacco products, and the "ever" use of smoking products rose by grade.
- Current use of any kind of tobacco products was nearly 5% among sixth-graders and rose by grade throughout middle and high school.
- Higher proportions of middle-school students than high school students reported first using cigarettes before age 11 and the younger the middle school student, the higher the proportion.
- An average of nearly 70% of students overall reported media/advertising influence regarding tobacco, but an average of only 41% overall reported exposure to anti-tobacco education in school in the past year.

- An average of 61% of middle school students who were current smokers reported that they wanted to quit smoking cigarettes; among high school students who were current smokers an average of 43% reported they wanted to quit.

Table 215. North Carolina Youth Tobacco Survey Results, Region 1 (2011)

Topic/Behavior	Percent Response, by Grade						
	6	7	8	9	10	11	12
Ever used tobacco products, any kind	19.6	31.5	35.5	47.4	54.9	51.8	65.3
Currently use tobacco products, any kind	4.8	9.6	14.6	16.3	22.6	27.3	35.0
First used cigarettes before age 11	71.0	34.2	27.8	29.1	19.5	10.4	14.7
Report media/advertising influence regarding tobacco	70.1	70.1	72.6	70.7	68.4	73.6	68.5
Report exposure to anti-tobacco education in school in past year	48.1	48.2	44.5	51.3	40.2	26.8	26.4
Current smokers who want to stop smoking cigarettes	83.5	46.7	53.4	29.8	40.8	48.6	52.3

Source: Detailed Summary Tables-Eastern/Coastal Region (Region 1), NC Youth Tobacco Survey, 2011, Middle School and High School Tables. NC Department of Health and Human Services, Surveillance and Evaluation Team, Tobacco Prevention and Control Branch.

CHAPTER FIVE: ENVIRONMENTAL DATA

AIR QUALITY

Air Quality Index

Nationally, outdoor air quality monitoring is the responsibility of the Environmental Protection Agency (EPA). In NC, the agency responsible for monitoring air quality is the Division of Air Quality (DAQ) in the NC Department of Environment and Natural Resources (NC DENR).

The impact of air pollutants in the environment is described on the basis of emissions, exposure, and health risks. A useful measure that combines these three parameters is the EPA's Air Quality Index (AQI). The EPA monitors and catalogues AQI measurements at the county level, but not in all counties. There is no AQI monitoring station in or near Pasquotank County.

Toxic Releases

Over 4 billion pounds of toxic chemicals are released into the nation's environment each year. The US Toxic Releases Inventory (TRI) program, created in 1986 as part of the Emergency Planning and Community Right to Know Act, is the tool the EPA uses to track these releases. Approximately 20,000 industrial facilities are required to report estimates of their environmental releases and waste generation annually to the TRI program office. These reports do not cover all toxic chemicals, and they omit pollution from motor vehicles and small businesses (81).

Table 216 lists the TRI chemicals released in Pasquotank County in 2011 and the facilities responsible for releasing them.

- Pasquotank County ranked last out of 86 counties in NC subject to toxic releases.
- For 2011, there were no TRI chemicals released, even though there are two facilities in the county subject to filing a report because they at least occasionally release copper compounds. The facilities in question are Fortress Wood Products and Universal Forest Products, LLC, both located in Elizabeth City. Both firms are distributors of wood products, and the copper compounds in question are used for wood preservation.

Table 216. Facilities Releasing TRI Chemicals, Pasquotank County (2011)

Location	Total On- and Off-Site Disposal or Other Releases, In Pounds	County Rank (of 86 reporting) for Total Releases	Compounds Released in Greatest Quantity	Quantity Released, In Pounds	Releasing Facility	Facility Location
Pasquotank County	0	86	Copper compounds	0	Fortress Wood Products	Elizabeth City
					UFP Elizabeth City LLC	Elizabeth City
NC Total	58,992,762					
NC County Average	58,992					

Source: *TRI Release Reports: Chemical Reports, 2011.* Retrieved on November 6, 2012 from US EPA TRI Explorer, Release Reports, Chemical Reports website: http://iaspub.epa.gov/triexplorer/tri_release.chemical.

WATER QUALITY

Drinking Water Systems

The EPA is responsible for monitoring the safety of drinking water and water system violations of the federal Safe Drinking Water Act (SDWA). The EPA's Safe Drinking Water Information System (SDWIS) contains information about public water systems and their violations of EPA's drinking water regulations, as reported to EPA by the states. These regulations establish maximum contaminant levels, treatment techniques, and monitoring and reporting requirements to ensure that water systems provide safe water to their customers (82).

As of July 21, 2012, SDWIS listed four active water systems in Pasquotank County. All were *community water systems* that together served 37,472 people; all were municipal water systems. A community water system is one that serves at least 15 service connections used by year-round residents or regularly serves 25 year-round residents. This category includes municipalities, subdivisions and mobile home parks.

The EPA records in SDWIS violations of drinking water standards reported to it by states. It records violations as either *health-based* (contaminants exceeding safety standards or water not properly treated) or *monitoring- or reporting-based* (system failed to complete all samples or sample in a timely manner, or had another non-health related violation).

Table 217 lists the active water systems in Pasquotank County as of July 12, 2012. The table also includes any *health-based* violations for the period from 2000 through 2011.

- All the water systems rely on groundwater sources.
- No health violations were recorded for any of the systems listed over the period 2000-2011.

Table 217. Active Water Systems in Pasquotank County (As of July 12, 2012)

Type of Water System	Total Population Served	Primary Water Source Type	Health Violations 2000-2011
Community Water Systems			
Elizabeth City Annex	188	Purchased groundwater	None
Elizabeth City, Town of	18,683	Groundwater	None
Pasquotank County RO Water System	8,185	Groundwater	None
Pasquotank County Water System	10,416	Groundwater	None
Total	**37,472**		

Source: *Safe Drinking Water Search for the State of North Carolina*. Retrieved on November 6, 2012 from US EPA Envirofacts Safe Drinking Water Information System (SDWIS) website: http://www.epa.gov/enviro/facts/sdwis/search.html.

The On-site Water Protection program of the ARHS/Pasquotank County Health Department's Environmental Health Division assures safe ground water to protect the public from illness caused by unsafe water. On the drinking water side, the agency's responsibility covers only private drinking water wells, not community water systems. Table 218 summarizes ARHS/Pasquotank County Health Department activities related to wells and well testing for 2008 through 2010 as catalogued by the state's Environmental Health Section.

Table 218. Pasquotank County Department of Public Health On-Site Water Protection Activities: Well Water 2008-2010

Activity	2008	2009	2010
Well Sites Evaluated	N/A	3	5
Well Site Consultative Visits	N/A	N/A	N/A
Well Construction Permits Issued			
New	1	2	4
Repair	1	1	1
Bacteriological Samples Collected	N/A	1	5
Other Samples Collected	N/A	1	5

Source: NC DHHS, Environmental Health Section, On-Site Water Protection Branch, County Program Reviews and Activity Reports. County Activity Totals, 2008, 2009, 2010; http://ehs.ncpublichealth.com/osww_new/new1/progimprovteam.htm.

Wastewater Systems

Municipalities operate jurisdiction-wide wastewater treatment systems. It appears that Pasquotank County government does not operate a wastewater treatment system, but Elizabeth City does, according to NC DENR (83).

City of Elizabeth City Central Wastewater System

The Rogerson Wastewater Treatment Facility in Elizabeth City is a secondary treatment facility which utilizes a conventional activated sludge process to produce a high quality effluent. It also has the capability to utilize a biological nutrient removal process to eliminate nutrients (nitrogen and phosphorus) from the effluent. The Facility has a design capacity of 4.5 MGD (million gallons per day) with a peak flow of 11.25 MGD. Wastewater is received at the facility via three pipes: a 24-inch force main from the downtown area, another 24-inch force main, and an 8-inch force main from the north side of town. The make-up of the wastewater is primarily domestic with some light industrial wastewater. The treated wastewater is permitted for discharge into the Pasquotank River. The sludge that is produced is thickened and stabilized with lime to meet Class B requirements as defined by EPA regulations and then hauled to a permit area in the county to be land applied (84).

The ARHS/Pasquotank County Health Department's On-site Water Protection program also is responsible for activities associated with subsurface sewage collection, treatment, and disposal, with a focus on private septic systems, not municipal sewage systems. Table 219 summarizes ARHS/Pasquotank County Health Department activities related to septic systems for 2008 through 2010 as catalogued by the state's On-Site Water Protection Branch.

Table 219. Pasquotank County Department of Public Health On-Site Water Protection Activities: Septic Systems 2008-2010

Activity	2008	2009	2010
Site Visits (all OSWW Field Activities not listed below)	N/A	N/A	N/A
Sites Evaluated (or Re-evaluated)	119	71	53
Operation Permits Issued	101	68	48
Improvement Permits Issued - Repair or replace malfunctioning system	3	N/A	N/A
Construction Authorizations			
New, Revision or Relocation	87	42	43
Repair/Replacement of Malfunctioning System	7	13	10
Sewage Complaints Investigated	N/A	N/A	N/A

Source: NC DHHS, Environmental Health Section, On-Site Water Protection Branch, County Program Reviews and Activity Reports. County Activity Totals, 2008, 2009, 2010; http://ehs.ncpublichealth.com/osww_new/new1/progimprovteam.htm.

NPDES Permits

Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into US waters. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Table 220 lists the NPDES-permitted dischargers in Pasquotank County and the destinations and permitted volumes of their discharges. One of the four permitted dischargers is a wastewater treatment plant operated by the City of Elizabeth City; the other three are municipal water treatment plants.

Table 220. National Pollutant Discharge Elimination System (NPDES) Permitted Dischargers, Pasquotank County (November, 2012)

Owner	Facility	Type	Discharge Destination	Permitted Flow (Gal/Day)
City of Elizabeth City	Elizabeth City WWT	Wastewater Treatment Plant, Municipal, Large	Pasquotank River	4,500,000
Pasquotank County	Pasquotank County	Water Treatment Plant	Albemarle Sound	665,000
City of Elizabeth City	Elizabeth City WTP	Water Treatment Plant	Knobbs Creek	Not limited
Pasquotank County	Pasquotank County	Water Treatment Plant	New Begun Creek	Not limited

Source: NC Department of Environment and Natural Resources, Division of Water Quality, Surface Water. NPDES Wastewater Permitting and Compliance Program. Permit Info, List of Active Individual Permits as of 11/1/12; http://portal.ncdenr.org/web/wq/swp/ps/npdes/.

SOLID WASTE

Solid Waste Disposal

Table 221 presents figures summarizing tonnage of solid waste disposed in Pasquotank County, the ARHS region, Scotland County, and NC for the period FY2006-07 through FY2010-11.

- In FY2010-11, Pasquotank County managed 39,385 tons of municipal solid waste (MSW) for a rate of 0.97 tons per capita. This tonnage represented no change from the per capita rate for FY1991-92 (the period customarily used for the base rate).
- As a regional average, the per capita rate of waste disposed in FY2010-11 fell by 1% from the rate for the base year.
- The per capita rate in Scotland County decreased 38% between the base year and FY2010-11.
- During the same FY2010-11 period the overall state per capita solid waste management rate was 8% less than the FY1991-92 base per capita rate.
- Note that with the exception of Pasquotank County, the number of MSW tons disposed decreased from year to year in all of the jurisdictions over the period cited *until* FY2010-11.

Table 221. Solid Waste Disposal
FY2006-07 through FY2010-11

Location	MSW Tons Managed 1991-1992	MSW Tons Disposed					Base Year Per Capita (1991-1992)	Per Capita Rate 2010-2011	% Change Base Year to 2010-2011
		2006-07	2007-08	2008-09	2009-2010	2010-2011			
Pasquotank County	30,150.34	38,833.70	34,155.01	42,609.05	42,932.63	39,385.28	0.97	0.97	0
Regional Total	90,272.93	132,603.30	129,121.09	117,803.40	112,837.00	116,918.14	n/a	n/a	n/a
Regional Average	12,896.13	18,943.33	18,445.87	16,829.06	16,119.57	16,702.59	0.78	0.77	-1
Scotland County	39,867.42	33,609.07	31,358.95	29,697.00	25,016.54	26,381.74	1.17	0.73	-38
State of NC	7,257,428.09	11,837,103.91	11,284,712.33	9,910,030.73	9,395,457.19	9,467,044.71	1.07	0.99	-8

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Program, NC Solid Waste Management Annual Report, Fiscal Years 2008-2009, 2009-2010, 2010-11; http://wastenot.enr.state.nc.us/swhome/AR08_09/AR08_09.pdf.

Table 222 presents the FY2010-11 County Waste Disposal Report for Pasquotank County.

- The majority of Pasquotank County's solid waste is delivered directly to or collected and transferred to facilities outside the county.

Table 222. County Waste Disposal Report, Pasquotank County
(FY2010-11)

Location	Facility Name	Facility Type	Tons Received	Tons Transferred
Pasquotank County	Pasquotank County C&D Landfill	Construction & Demolition Landfill	7,175.51	0.00
	East Carolina Regional Landfill	Municipal Solid Waste Landfill	13,425.96	0.00
	Waste Industries - Sampson County Disposal, Inc .	Municipal Solid Waste Landfill	1.87	0.00
	Atlantic Waste Disposal, Inc. (VA)	Municipal Solid Waste Landfill	22,250.11	0.00
	Currituck Transfer Station	Municipal Solid Waste Transfer Station	4.84	4.84
	Pasquotank County Transfer Station	Municipal Solid Waste Transfer Station	20,717.21	20,717.21

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section. Solid Waste Management Annual Reports, FY2010-2011; County Waste Disposal Report Fiscal Year 2010-2011. http://portal.ncdenr.org/c/document_library/get_file?p_l_id=4649434&folderId=4667253&name=DLFE-38490.pdf.

Table 223 describes the capacities of all the landfills in the ARHS counties, including Pasquotank County.

- Based on current fiscal year tons, the estimated remaining "life" capacity of the East Carolina Regional Landfill was 21.54 years from FY2010-11.
- According to this data, the Pasquotank County Landfill has about reached capacity.

Table 223. Capacity, ARHS Region Landfills (FY2010-11)

Location	Facility Name	Open Date	Volume Overall	Volume Overall Remaining	Volume Overall Remaining in Tons	Volume Overall Remaining in Years (Fiscal Year Tons)
Bertie	East Carolina Regional Landfill	8/6/93	24,200,000	14,445,905	11,955,903	21.54
Pasquotank County	Pasquotank County Landfill	4/1/96	730,700	67,560	19,008	2.52

Source: NC Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section. Solid Waste Management Annual Reports, FY2010-2011; Landfill Capacity Report Fiscal Year 2010-2011. http://portal.ncdenr.org/c/document_library/get_file?p_l_id=4649434&folderId=4667253&name=DLFE-41641.pdf.

East Carolina Regional Landfill

The East Carolina Regional Landfill, located in Aulander (Bertie County) is one of fewer than 10 regional landfills statewide. An EPA-regulated facility, it serves all of northeastern NC. It has been in operation for more than a decade, and in that time has acquired a history of violations for non-compliance with Clean Air Act standards (85). Most of those violations have had to do with control of gases released during the natural waste digestion process.

The company (the landfill is operated by Republic Services, Inc.) maintains a landfill gas collection and control system with gas-fired candlestick-type flares. Landfill gas typically is 60% methane; most of the remainder usually is carbon dioxide. Approximately 1% of landfill gas may be composed of nitrogen, oxygen, water vapor, hydrogen sulfide, and other contaminants, depending on the substrate being digested (86). Landfill gas control systems exist to assure the safety, system integrity, gas destruction and odor control of the landfill. As material continues to be deposited in the landfill over time, increasing amounts of landfill gas is generated, requiring additional control capacity as part of the permitting process. The operator of the landfill appears to acknowledge this need (87).

Municipal Solid Waste Management Systems

Pasquotank County Solid Waste Management and Recycling

Pasquotank County government does not operate a solid waste collection system except to provide convenience centers to which county residents may dispose of household trash, yard waste, and recyclable materials.

Convenience Centers

Pasquotank County operates seven convenience centers for waste collection: one at the landfill site, one each in the communities of Newland, Providence, Mt. Herman, Weeksville, on Wellfield Road, at the Coast Guard site. The convenience centers accept recyclable aluminum, steel and

plastic containers, mixed glass, mixed paper products, wooden pallets, lawn clippings and debris, white goods, cooking oil, and automotive products. Electronic waste and tires are accepted at the landfill and Newland convenience centers only. Non-recyclable goods accepted at the convenience centers include household garbage, bulky waste and residential construction debris. Items not accepted include propane gas tanks, oil barrels, medical waste, industrial waste, commercial waste, liquid and hazardous waste, hot or smoldering coals or dead animals (88).

City of Elizabeth City Solid Waste Management and Recycling

The City of Elizabeth City Public Works Department Sanitation Division provides trash and recycling collection for the residents of the city. The city provides a 90-gallon trash receptacle to each home within the City's corporate limits for the collection of all normal household garbage, small items and non-recyclables.

Curbside pickups of household refuse are made once weekly. The city also picks up yard waste on a different day and converts it to usable mulch; the city also will pick up tree limbs and branches on designated days. The Sanitation Division will pick up appliances and white goods by request. Bulk items (furniture, dismantled swing sets, carpeting, etc.) also can be picked up by prior arrangement.

Recyclables are picked up curbside on the same day as household garbage collection is scheduled. Only two types of collection containers are approved: a city-issued 19-gallon recycling bin and clear, see-through plastic bags. Recyclables collected include newspaper, glass, #1 and #2 plastics, and aluminum cans.

The City of Elizabeth City does not provide pickup of refuse for commercial and group housing developments, which must instead contract with commercial and building waste services. Some small businesses with minimal refuse may qualify to use the City's automated refuse service (89).

Hazardous Waste Generation

The EPA maintains a database that catalogs generators, transporters, and other handlers of hazardous wastes. The data, located in the Resource Conservation and Recovery Act Information (RCRAInfo) database, is accessed via EPA Envirofacts.

Table 224 lists the hazardous waste generators in Pasquotank County. Two of the generators listed, Fortress Wood Products and Universal Forest Products (UFP), also are among the Pasquotank County facilities releasing TRI chemicals, as cited previously. With the exception of DRS Technologies, which engages in aircraft manufacturing, and the US Coast Guard Base, all the others generators produce only small quantities of hazardous waste.

Table 224. Hazardous Waste Generators, Pasquotank County (Accessed April, 2013)

Location	Generator Name	Location	Type of Business (NAICS Code/Description)	Type of Generator
Pasquotank County	DRS Technologies	Elizabeth City	Aircraft manufacturing	Large Quantity
	US Coast Guard Base	Elizabeth City	Regulation and Administration of Transportation Programs	Large Quantity
	Albemarle Hospital Authority	Elizabeth City	General Medical and Surgical Hospitals	Small Quantity
	Carquest of Elizabeth City	Elizabeth City	Automotive Parts and Accessories Stores	Small Quantity
	Courtesy Ford	Elizabeth City	not provided	Small Quantity
	CVS Pharmacy	Elizabeth City	One Hour Photo Processing/Pharmacies and Drug Stores	Small Quantity
	Elizabeth City State University	Elizabeth City	not provided	Small Quantity
	Fortress Wood Products	Elizabeth City	Wood Preservation	Small Quantity
	Southgate Koretizing DSCA	Elizabeth City	Dry Cleaning and Laundry Services	Small Quantity
	Rochelle Cleaners Inc	Elizabeth City	Dry Cleaning and Laundry Services	Small Quantity
	UFP Elizabeth City	Elizabeth City	Sawmills and Wood Preserving	Small Quantity
	WalMart Supercenter #1527	Elizabeth City	Warehouse Clubs and Supercenters	Small Quantity

Source: US EPA, Envirofacts, RCRAInfo, Search; http://www.epa.gov/enviro/facts/rcrainfo/search.html.

LEAD

Lead is a highly toxic natural metal found in the environment in soil, dust, air, and water. Historically it was used for many years in common household products such as paint, batteries, makeup, and ceramics, as an additive to gasoline, and as an ingredient in pesticides. Currently, it is used in lead-acid batteries, fishing weights, marine paint, lead shot, bullets, and in the manufacture of some plastics. Recently, the electronics industry is using more lead in magnetic imaging equipment, transistors, night vision equipment, and energy generation (90).

People can get lead in their body if they put their hands or other objects covered with lead dust in their mouths, ingest paint chips, soil, or water that contains lead, or breathe in lead dust, especially during renovations that disturb painted surfaces. Children are at greatest risk.

The Children's Environmental Health Branch of DENR, via its Lead Poisoning Prevention Program, catalogues data on the results of blood lead level monitoring among children. Table 225 presents blood lead monitoring data for 2006-2010.

The data for Ages 1 and 2 are routine screening results; the data for Ages 6 Months to 6 Years represents children who have been tested because a lead poisoning hazard had been identified in their residential housing unit or their child-occupied facility (e.g., daycare facility). All results at the county level likely are unstable due to small numbers of positive cases.

Table 225. Blood Lead Assessment Results (2006-2010)

Location	Year	Ages 1 and 2					Ages 6 Months to 6 Years		
		Target Population	No. Tested	% Tested	No. ≥ 10µg/dL	% ≥ 10µg/dL	No. Tested	Confirmed 10-19 µg/dL	Confirmed ≥20 µg/dL
Pasquotank County	2006	1,074	656	61.1	16	2.4	857	**4**	N/A
	2007	1,118	605	54.1	12	2.0	834	**7**	**1**
	2008	1,136	590	51.9	**7**	**1.2**	836	**2**	**1**
	2009	1,151	625	54.3	**6**	**1.0**	753	**5**	N/A
	2010	1,102	699	63.4	**6**	**0.9**	835	**3**	N/A
Scotland County	2006	972	596	61.3	**4**	**0.7**	625	**1**	N/A
	2007	1,030	661	64.2	**1**	**0.2**	694	**1**	N/A
	2008	1,101	776	70.5	**3**	**0.4**	798	**1**	N/A
	2009	1,077	843	78.3	**3**	**0.4**	945	N/A	N/A
	2010	1,011	735	72.7	**3**	**0.4**	804	**1**	N/A
State of NC	2006	242,813	103,899	42.8	867	0.8	135,595	255	38
	2007	250,686	112,556	44.9	706	0.6	143,972	232	38
	2008	258,532	121,023	46.8	654	0.5	152,222	181	36
	2009	261,644	129,395	49.5	583	0.5	160,713	143	38
	2010	257,543	132,014	51.3	519	0.4	162,060	146	24

Source: NC DHHS, Division of Public Health, Environmental Health Section, Lead Surveillance Data, 2006-2010, Lead Surveillance Tables; http://deh.enr.state.nc.us/Children_Health/Lead/Surveillance_Data_Tables/surveillance_data_tables.html.

FOOD-, WATER-, AND VECTOR-BORNE HAZARDS

Food-, Water-, and Vector-Borne Diseases

A number of human diseases and syndromes are caused or exacerbated by microbial contaminants or by animal vectors in the natural environment. Several of these conditions are among the illnesses that must be reported to health authorities. A number of food-, water-, and vector- borne diseases are of increasing importance because they are either rare but becoming more prevalent, or spreading in geographic range, or becoming more difficult to treat. Among these diseases are Shiga toxin producing *E. coli*, salmonellosis, Lyme disease, West Nile virus infection, Eastern equine encephalitis, and rabies.

The Communicable Disease section of this report listed diagnoses of some of these diseases gathered when Pasquotank County residents presented at the emergency departments of the four hospitals in the region.

Table 226 summarizes cases of food-, water-, and vector-borne disease statewide in the period 2009-2012.

- The most common food-, water-, and vector-borne disease statewide is salmonellosis, followed by campylobacter infection and Rocky Mountain spotted fever (spotted fever rickettsiosis).

Table 226. Food-, Water-, and Vector-Borne Diseases, North Carolina (2009-2012)

Disease/Organism	Number of Cases			
	2009	2010	2011	2012[1]
Campylobacter infection	587	851	909	857
Cryptosporidiosis	160	94	115	88
E. Coli O157:H7 (or other STEC)	112	97	155	79
Ehrlichiosis	31	130	96	99
Encephalitis California Group (Lacrosse)	169	22	24	18
Hepatitis A	41	48	30	20
Listeriosis	27	22	21	9
Lyme Disease	252	89	75	71
Rocky Mountain Spotted Fever	325	292	305	431
Salmonellosis	1,806	2,352	2,516	1,612
Shigellosis	358	253	225	104

[1] 2012 data includes January-September 2012 only
Source: NC DHHS, Epidemiology Branch, Communicable Disease Section, Facts and Figures, NC Communicable Disease Reports, 2009, 2010, 2011, 2012; http://epi.publichealth.nc.gov/cd/figures.html.

Vector Control

Bacterial, viral and parasitic diseases that are transmitted by mosquitoes, ticks and fleas are collectively called *vector-borne diseases* (the insects and arthropods are the *vectors* that carry the diseases). Although the term vector can also apply to other carriers of disease—such as mammals that can transmit rabies or rodents that can transmit Hantavirus—those diseases are generally called *zoonotic* (animal-borne) diseases.

The most common vector-borne diseases found in North Carolina are carried by ticks and mosquitoes. The tick-borne illnesses most often seen in the state are Rocky Mountain Spotted Fever, ehrlichiosis, Lyme disease and Southern Tick-Associated Rash Illness (STARI). The most frequent mosquito-borne illnesses, or "arboviruses," in North Carolina include LaCrosse encephalitis, West Nile virus and Eastern equine encephalitis (91).

One way to prevent or limit the transmission of vector-borne illnesses is to control the vectors of the disease. In the case of mosquitoes, that is usually accomplished by improving cultural practices (e.g., emptying temporary water reservoirs like puddles, flowerpots and bird feeders or by people covering their skin or applying insect repellent when outdoors). In extreme cases, communities may sometimes resort to large-scale aerial spraying to destroy the insect or interfere with its reproductive cycle. Spraying initiatives can be controversial, however, since the typically broadcast application of the pesticide is non-selective and can affect humans and pets.

Rabies, a vector-borne disease, can be controlled among pets by having dogs and cats properly vaccinated. While pets can be protected that way, there is no practical way to control rabies in the wild, where it actually is more common. Table 227 lists the total number of rabies cases detected in the seven counties of the ARHS region over the period from 2005-2012. First of all, rabies is not common in the region, with only 40 cases identified region-wide in eight years. For comparison, there were 28 cases in Guilford County in 2012 alone. Secondly, rabies is more common in animals other than cats, dogs or bats. Of the 40 total rabies cases in the region between 2005 and 2012, the most common host was raccoons (21 cases); six cases were cats and one was a dog. Statewide in 2012 48% of all rabies cases were in raccoons.

Table 227. Animal Rabies Cases, ARHS Counties (2005-2012)

Location	Total Number of Animal Rabies Cases							
	2005	2006	2007	2008	2009	2010	2011	2012
Bertie County	0	0	0	0	2	1	0	1
Camden County	0	0	1	0	0	0	0	0
Chowan County	0	0	0	0	1	3	0	0
Currituck County	0	0	1	2	1	0	0	0
Gates County	1	2	0	2	0	0	0	1
Pasquotank County	1	0	1	2	5	3	0	0
Perquimans County	1	3	0	1	1	3	0	0
Regional Total	*3*	*5*	*3*	*7*	*10*	*10*	*0*	*2*

Source: NC Division of Public Health, Epidemiology. Rabies. Facts and Figures. Rabies by County, Tables by Year. http://epi.publichealth.nc.gov/cd/rabies/figures.html.

Animal Control in Pasquotank County

Animal control in Pasquotank County is the responsibility of the Pasquotank County Sheriff's Department. Located in Elizabeth City, the office serves residents of the county including Elizabeth City. Animal Control is available seven days a week from 8:00am to 4:00pm; emergency response is available after hours. All dogs and cats picked up by Animal Control are taken to the SPCA of Northeastern NC, located in Elizabeth City (see below).

Pasquotank County is covered by a public nuisance animal ordinance requiring owners to be responsible for their pets' actions. Additionally, all subdivisions and trailer parks have a leash law.

Elizabeth City does not allow more than three animals over the age of 6 months to be maintained on any property located in the city limits.

Any animal which bites a human that causes a break in the skin must be reported to animal control. Any animal not current on its rabies vaccination will be quarantined for 10 days at the SPCA or any veterinary facility in Pasquotank County. The owner will be responsible for all costs of this quarantine. The animal will not be released from quarantine until it has been properly vaccinated for rabies after the quarantine period is over (92).

Animal Shelters in Pasquotank County

The SPCA of Northeastern NC, the local animal shelter for Pasquotank and Camden Counties, is located in Elizabeth City. It is open to the public Saturday through Wednesday 10:00 to 3:30 and Thursday and Friday 10:00 to 6:00.

The SPCA of Northeastern NC provides a loving environment, food, shelter and temporary housing for all lost, strayed or unwanted domestic animals from Pasquotank and Camden Counties. The SPCA does all it can to prevent the spread of diseases at the shelter. Services offered by the organization include educational seminars on the importance of good pet care. The shelter promotes a spay/neuter program, including vouchers to help new owners with the cost of these procedures, since one requirement of adoption is that the adopted pet must be spayed or neutered (93).

BUILT ENVIRONMENT

The term *built environment* refers to the human-made surroundings that provide the setting for human activity, ranging in scale from buildings and parks or green space to neighborhoods and cities. As often used the term also includes supporting infrastructure for those settings, such as the water supply, or the energy grid. In recent years, public health research has expanded the definition of built environment to include healthy food access, community gardens, recreational facilities, and the ease of getting around on foot or on bicycle.

Access to Grocery Stores and Farmers' Markets

Table 228 presents data on the availability of grocery stores.

- The number of grocery stores in Pasquotank County decreased from 12 to eight between 2007 and 2009.
- Approximately 667 Pasquotank County households (~4%) have no car and therefore have low access to grocery stores.

Table 228. Availability of Grocery Stores, ARHS Region (2007 and 2009; 2010)

Location	Grocery Stores						2010			
	2007		2009		% Change (2007-2009)		Households with no car and low access		Low Income & Low Access	
	#	# per 1,000 Population	#	# per 1,000 Population	#	# per 1,000 Population	#	%	#	%
Bertie County	9	0.470	6	0.320	-33.33	-32.93	743	8.89	1,010	4.75
Camden County	1	0.110	1	0.110	0.00	-3.11	48	1.32	98	0.99
Chowan County	5	0.340	5	0.340	0.00	-0.31	274	4.52	1,093	7.40
Currituck County	9	0.380	9	0.380	0.00	-1.43	186	2.10	649	2.76
Gates County	0	0.000	2	0.170	null	0.00	183	3.92	2	0.02
Pasquotank County	12	0.300	8	0.200	-33.33	-34.54	667	4.46	3,707	9.12
Perquimans County	3	0.250	2	0.160	-33.33	-34.84	249	4.44	72	0.54
Regional Total	39	n/a	33	n/a	n/a	n/a	2,349	n/a	6,632	n/a
Regional Average	6	n/a	5	n/a	n/a	n/a	336	n/a	947	n/a

Source: *Grocery Stores.* U.S. Department of Agriculture Economic Research Service, Your Food Environment Atlas website: http://ers.usda.gov/FoodAtlas/.

Table 229 presents data on the availability of farmers' markets.

- Despite the rural, agrarian nature of much of the ARHS region, there are very few farmers' markets anywhere in the region: two in 2009 and three in 2012, one of which was in Pasquotank County.

Table 229. Availability of Farmers' Markets, ARHS Region (2009 and 2012)

Location	Farmers' Markets					
	2009		2012		% Change (2009-2012)	
	# Markets	# Markets per 1,000 Population	# Markets	# Markets per 1,000 Population	# Markets	# Markets per 1,000 Population
Bertie County	0	0.000	0	0.000	0.0	0.0
Camden County	0	0.000	0	0.000	0.0	0.0
Chowan County	1	0.070	2	0.140	1.0	99.98
Currituck County	0	0.000	0	0.000	0.0	0.0
Gates County	0	0.000	0	0.000	0.0	0.0
Pasquotank County	1	0.030	1	0.030	0.0	2.17
Perquimans County	0	0.000	0	0.000	0.0	0.0
Regional Total	2	n/a	3	n/a	1.0	n/a

Source: *Farmers' Markets.* U.S. Department of Agriculture Economic Research Service, Your Food Environment Atlas website: http://ers.usda.gov/FoodAtlas/.

Access to Fast Food Restaurants

Table 230 presents data on the availability of fast food restaurants.

- There was an average of 11 fast food restaurants in each county of the ARHS region in both 2007 and 2009.
- Pasquotank County had 31 fast food restaurants in 2007 and 27 in 2009. In 2009 there were more than three times as many fast food restaurants in the county as grocery stores.

Table 230. Availability of Fast Food Restaurants, ARHS Region (2007 and 2009)

Location	Fast Food Restaurants					
	2007		2009		% Change (2007-2009)	
	#	# per 1,000 Population	#	# per 1,000 Population	#	# per 1,000 Population
Bertie County	6	0.310	7	0.370	16.7	17.4
Camden County	2	0.220	3	0.310	50.0	45.3
Chowan County	10	0.680	11	0.750	10.0	9.7
Currituck County	24	1.010	22	0.910	-8.3	-9.6
Gates County	1	0.090	1	0.090	0.0	-0.3
Pasquotank County	31	0.760	27	0.650	-12.9	-14.5
Perquimans County	3	0.250	3	0.240	0.0	-2.3
Regional Total	77	n/a	74	n/a	n/a	n/a
Regional Average	11	n/a	11	n/a	n/a	n/a

Source: *Fast Food Restaurants.* U.S. Department of Agriculture Economic Research Service, Your Food Environment Atlas website: http://ers.usda.gov/FoodAtlas/.

Access to Recreational Facilities

Table 231 presents data on the availability of recreational and fitness facilities.

- According to data in the table there were two recreation and fitness facilities in Pasquotank County in 2007 and five in 2009. A more recent listing of recreational facilities was provided earlier in this document.

Table 231. Availability of Recreation and Fitness Facilities, ARHS Region (2007 and 2009)

Location	Recreation and Fitness Facilities					
	2007		2009		% Change (2007-2009)	
	#	# per 1,000 Population	#	# per 1,000 Population	#	# per 1,000 Population
Bertie County	2	0.110	1	0.060	-50	-49.7
Camden County	0	0.000	0	0.000	0	0.0
Chowan County	1	0.070	1	0.070	0	-0.3
Currituck County	3	0	2	0	-33	-34.3
Gates County	0	0.000	0	0.000	0	0.0
Pasquotank County	2	0.050	5	0.130	150.0	145.5
Perquimans County	1	0.090	1	0.080	0.0	-2.3
Regional Total	9	n/a	10	n/a	n/a	n/a

Source: *Physical Activity Levels and Outlets.* U.S. Department of Agriculture Economic Research Service, Your Food Environment Atlas website: http://ers.usda.gov/FoodAtlas

CHAPTER SIX: COMMUNITY INPUT

COMMUNITY HEALTH SURVEY METHODOLOGY

Interview locations were randomly selected using a modified two-stage cluster sampling methodology. The survey methodology is an adaptation of the Rapid Needs Assessment (RNA) developed by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) for surveying populations after natural disasters. The WHO/CDC RNA approach was modified to utilize mobile GIS software, handheld computers and GPS receivers.

For the Albemarle Community Health Assessment, the assessment area includes seven counties and estimates need to be reported for each county so a stratified two-stage cluster sampling method was employed. Statistical power analysis suggested that 80 surveys per county would yield acceptable precision of estimates. Census blocks were selected as the type of geographic cluster for the first stage of the two-stage sample. To ensure sufficient households for second stage sampling, only census blocks with at least ten households were included in the sampling frame. The sample was selected utilizing a toolbox in the ESRI ArcMap GIS software called the Community Assessment for Public Health Emergency Response (CASPER) Toolkit, developed by the CDC. The sample selected included four households in each of 20 census blocks in each of seven counties, for a total of 560 surveys. Sampling was conducted with replacement so blocks had the chance of being selected twice. In these instances, eight households per block were selected for interviews instead of four.

To complete data collection in the field, survey teams generally consisted of two persons: one to read the survey questions and one to enter the responses into a handheld computer for data entry and analysis with Epi Info 7 software. Training sessions on data collection and navigation using handheld GPS were provided for survey teams on; October 16, 2012 in Pasquotank County, October 29, 2012 in Gates County, November 1, 2012 in Currituck County, November 7, 2012 in Perquimans County, November 8, 2012 in Chowan County, and November 12, 2012 in Bertie County. For the seven county region, surveys were conducted from October 16, 2012 through February 2013.

Survey teams were comprised of health department and hospital staff, as well as volunteers recruited from each of the seven assessment counties. Survey protocol followed procedures established for RNAs and Community Health Assessments whereby surveys were conducted during work hours and early evening hours, as well as some Saturdays. When target households resulted in refusals or not-at-homes, survey teams proceeded on to the next household on their route and within the designated survey cluster.

Survey responses were analyzed using Epi Info 7 software developed by the CDC. Complex sampling frequencies, tables, and means procedures were used to generate weighted frequencies and their corresponding 95% confidence intervals. The survey weights, based on census block population size, were implemented to account for the 2-stage cluster sampling methodology used in selecting households for interview. A total of 560 surveys were analyzed.

The survey instrument and results are provided in the Appendix to this document. Spanish surveys were available for the Hispanic population. An instruction card in Spanish was handed to any Spanish speaking resident explaining the survey and that an interpreter would be available to conduct the survey via phone if preferred. An area on the instruction card was provided for the resident to write their name and phone number.

STAKEHOLDER SURVEY OVERVIEW

The 2013 ARHS Community Health Needs Assessment process also included gathering input from formal and informal leaders of the community in order to learn from them about the needs of the individuals they serve and to better understand the health status of the region's communities as a whole.

A description of the methodology used to collect leaders' opinions, as well as a summary of the stakeholder survey results, are presented in the Appendix to this document.

CHAPTER SEVEN: ISSUES PRIORITIZATION

PRIORITIES SELECTION

On September 20, 2013, the Healthy Carolinians of the Albemarle (HCOTA) Partnership met to identify the leading community health problems for Pasquotank, Perquimans, Camden, and Currituck Counties. Data gathered from the community surveys, stakeholder surveys, and secondary data were presented and discussed.

In attendance were: Amy Underhill, Holly Cook-Wood, Juanita Johnson, Susan Norton, Ashley Miller, Dana Hamill, Pam Hurdle, Yvonne Mullen, Kay Cooper, Dr. Spellman, Barbara Courtney, and Amanda Betts.

A PowerPoint presentation highlighting the strengths and weaknesses from the secondary data and information from the primary survey and stakeholder survey for each of the Healthy Carolinians of the Albemarle counties was shared with the group by Amy Underhill, chair of HCOTA. After the data presentation a roundtable discussion was facilitated among the group to identify service gaps, educational needs, and awareness issues within the four counties. Participants were then asked to use the list that was developed to anonymously vote for their top three to five priority areas. The priority areas with the most votes were as follows:

Priority Areas

Obesity – Unhealthy eating and lack of physical activity.
Chronic Disease including heart disease, stroke, cancer, and diabetes – identification and management.
Personal accountability – making health a priority in one's life, self-responsibility, taking advantage of health programs, making healthier life style choices.
Educational and resource communication regarding services and programs within the four counties – marketing, resource development, community collaboration especially with the faith and church community.
Program funding.

NEXT STEPS

The next step Healthy Carolinians of the Albemarle plans to take is the development of the community action plans which are due in June 2014. The Action Plans will reflect the priority health issues, strategies, and steps to implement change along with our target populations, and resource networking with the various community partners. This is a critical component that the partnership must take in selecting activities that are reasonable and relatively easy to implement and align with the 2020 Healthy People Objectives in Pasquotank, Perquimans, Camden, and Currituck Counites. Healthy Carolinians of the Albemalre Partnership members will utilize the information gathered during the community assessment process and the prioritization process to clearly define our community's health priorities, actions, and expected results. Healthy Carolinians of the Albemarle will meet on January 17, 2014 to begin this process. Partnership meetings will take place the third Friday each month throughout this process. All partnership members as well as the Steering Committee will be involved in completing new or revised action plans based on the prioritization of health needs. The completed action plans will include a description of each health issue/problem and will specify the proposed actions and community

organizations that will provide and coordinate the intervention activities. The action plans will be developed after carefully considering all the factors that cause and perpetuate the problem they address. The plans will also identify how progress towards the outcome will be measured.

DISSEMINATION PLAN

Sheila Pfaender, Public Health Consultant presented the results of the CHA findings in: Currituck and Camden Counties on August 19th at Currituck Cooperative Extension Agency, Pasquotank County on August 20th at Pasquotank County Health Department, and Perquimans County on August 21st at the Albemarle Commission Building. The public was notified and invited to attend all of the events via local newspapers and Albemarle Regional Health Services' (ARHS) website and Facebook page. The CHA documents are available for review and/or download on ARHS' website at www.arhs-nc.org. The CHA Leaders Team, as well as all community members involved with this CHA process did receive an invitation to the CHA presentations via e-mail and were notified that the documents are available on-line, and the link was included.

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2013 COMMUNITY HEALTH SURVEY

ALBEMARLE REGIONAL HEALTH SERVICES
Partners in Public Health

Pasquotank County

Hello, I am _____ and this is _____ representing the Pasquotank County Health Department. (Show badges.) You are being asked to participate in a health survey for our county because your address was randomly selected. The purpose of this survey is to learn more about the health and quality of life in Pasquotank County, North Carolina. The Pasquotank County Health Department, Healthy Carolinians of the Albemarle and Albemarle Health will use the results of this survey to help develop plans for addressing the major health and community issues in Pasquotank County. All the information you give us will be completely confidential and will not be linked to you in any way.

The survey is completely voluntary. All of your answers are confidential. It should take no longer than 30 minutes to complete. If you don't live here at this house, please tell me now.

Would you be willing to participate?

If they want to confirm this survey is legitimate, please ask them to call the Health Department:

- *Pasquotank Health Dept. → 252-338-4400*

Additionally, the numbers for the local law enforcement are provided here:

- *Pasquotank County Sheriff's Office → 252-338-2191*

The purpose of this survey is to learn more about health and quality of life in the Albemarle Region of North Carolina. The local health departments of Albemarle Regional Health Services, Albemarle Health, Vidant Bertie Hospital, Vidant Chowan Hospital, Gates Partners for Health, Healthy Carolinians of the Albemarle, and Three Rivers Healthy Carolinians will use the results of this survey and other information to help develop plans for addressing the health problems of the region and its seven constituent counties: Pasquotank, Perquimans, Camden, Chowan, Currituck, Bertie, and Gates. Thank you for taking the time to complete this Community Health Survey. **If you have already completed this survey, or if you don't live in Pasquotank County, please STOP here.**

Your answers on this survey will not be linked to you in any way.

PART 1: Quality of Life Statements

The first part of this survey is about the quality of life in Pasquotank County. After I read the statement, please tell me whether you strongly disagree, disagree, agree, or strongly agree with it. Handheld will have a refused to answer/no response option for all questions in the survey.

Quality of Life Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
Question 1 **There is a good health care system in Pasquotank County.** (Think about health care options, access, cost, availability, quality, etc.)	**8.3%**	**26.2%**	**40.4%**	**6.9%**
Question 2 **Pasquotank County is a good place to raise children.** (Think about the availability and quality of schools, child care, after school programs, places to play, etc.)	**0.9%**	**16.3%**	**52.7%**	**17.6%**
Question 3 **Pasquotank County is a good place to grow old.** (Think about elder-friendly housing, access/ways to get to medical services, elder day care, social support for the elderly living alone, meals on wheels, etc.)	**2.5%**	**25.0%**	**48.6%**	**18.9%**
Question 4 **There are plenty of ways to earn a living in Pasquotank County.** (Think about job options and quality of jobs, job training/higher education opportunities, etc.)	**19.9%**	**37.8%**	**20.6%**	**3.0%**
Question 5 **Pasquotank County is a safe place to live.** (Think about safety at home, in the workplace, in schools, at playgrounds, parks, shopping centers, etc.)	**1.2%**	**13.0%**	**70.7%**	**14.0%**
Question 6 **There is plenty of support for individuals and families during times of stress and need in Pasquotank County.** (Examples include neighbors, support groups, faith community outreach, agencies, organizations, etc.)	**9.5%**	**25.4%**	**46.1%**	**7.3%**
Question 7 **Pasquotank County has clean air.**	**0%**	**0.2%**	**77.2%**	**21.1%**
Question 8 **Pasquotank County has clean water.**	**5.4%**	**17.3%**	**64.9%**	**10.4%**

PART 2: County Health, Behavioral, and Social Problems

The next three questions will ask your opinion about the most important health, behavioral and social problems, and community issues in Pasquotank County.

SHOW QUESTION PICK LIST

Question 9

This next question is about health problems that have the largest impact on the community as a whole. (Problems that you think have the greatest overall effect on health in the community.) Please look at this list of health problems and choose 5 of the most important health problems in Pasquotank County. Remember this is your opinion and your choices will not be linked to you in any way. If you do not see a health problem you consider one of the most important, please let me know and I will add it in. I can also read these out loud as you think about them. Top three responses bolded:

- **a. Obesity/Overweight**
- b. Infant Death
- c. Asthma
- **d. Cancer**
- **e. Diabetes**
- f. Heart Disease
- g. Stroke
- h. Alzheimer'
- i. Motor Vehicle Accidents
- j. Tobacco Use
- k. Child Care/Parenting
- l. Elder Care
- m. Substance Abuse (ex: drugs and alcohol)
- n. Suicide
- o. Mental Health (depression, anxiety, mood disorders)
- p. Domestic Violence
- q. Crime
- r. Rape/ Sexual Abuse
- s. Gun Related Injuries
- t. Other:_____
- u. None

Question 10

This next question is about unhealthy behaviors that some individuals do that have the largest impact on the community as a whole. (Unhealthy behaviors that you think have the greatest overall effect on health and safety in the community.) Please look at this list of unhealthy behaviors and choose 5 of the unhealthiest behaviors among Pasquotank County residents. Remember this is your opinion and your choices will not be linked to you in any way. If you do not see an unhealthy behavior that you consider one of the most important, please let me know and I will add it in. I can also read these out loud as you think about them. Top three responses bolded:

- **a. Poor eating habits**
- **b. Lack of Exercise**
- c. Going to a dentist for check-ups
- d. Going to the doctor for yearly check-ups and screenings
- e. Taking prescription medications
- f. Receiving Prenatal Care
- g. Getting flu shots and other vaccines
- h. Preparing for an emergency/disaster
- i. Using child safety seats
- j. Using seat belts
- k. Driving Safely
- l. Driving Under the Influence
- **m. Smoking**
- n. Breathing Secondhand Smoke
- o. Child care/ parenting
- p. Having unsafe sex
- q. Substance Abuse (ex: drugs and alcohol)
- r. Suicide
- s. Mental Health (depression, anxiety, mood disorders)
- t. Domestic Violence
- u. Crime
- v. Rape/ Sexual Abuse
- w. Gun Related Injuries
- x. Other: _____
- y. None

Question 11

Using this list, choose the <u>five</u> (5) most important "community social issues" in Pasquotank County. (Social issues that you think have the greatest overall effect on the quality of life in the community.) Remember this is your opinion and your choices will not be linked to you in any way. If you do not see an unhealthy behavior that you consider one of the most important, please let me know and I will add it in. I can also read these out loud as you think about them. Top three responses bolded:

- **a. Access to prescription drugs**
- b. Disaster preparedness/bioterrorism
- **c. Homelessness**
- d. Inadequate/unaffordable housing
- e. Lack of affordable health insurance/health care
- **f. Lack of education/dropping out of school**
- g. Lack of healthy food choices
- h. Lack of mental health services
- i. Lack of services for people with cultural or language differences
- j. Lack of recreational facilities
- k. Lack of health care providers
- l. Lack of transportation options
- m. Neglect and abuse (of a child, a spouse, the elderly, etc.)
- n. Pollution (air, water, land)
- o. Poverty
- p. Racism
- q. Underemployment/lack of well-paying jobs
- r. Violent crime (rape, murder, assault, etc.)
- s. Other: _____
- t. None:

PART 3: Community Service Problems and Issues

Question 12

This next question is about community-wide issues that have the largest impact on the overall quality of life in Pasquotank County. Please look at this list and choose 5 of the following services needing the most improvement in your neighborhood or county. Remember this is your opinion and your choices will not be linked to you in any way. If there is a service that you think needs improvement that is not on this list, please let me know and I will write it in. If you would like, I can read these out loud as you think about them. Top three responses bolded:

a. **Animal control**
b. **Availability of child care**
c. Availability of elder care
d. Services for disabled people
e. **More affordable health services**
f. Inadequate/unaffordable housing
g. Lack of health care providers
What kind? _____
h. Culturally appropriate health services
i. Counseling/ mental health/ support groups
j. Availability of healthy food choices
k. Lack of/inadequate health insurance
l. Availability of recreational facilities (parks, trails, community centers)
m. Availability of healthy family activities
n. Availability of positive teen activities
o. Transportation options
p. Availability of employment
q. Higher paying employment
r. Un-safe, un-maintained roads
s. Other: _____
t. None

PART 4: Personal Health

The following questions ask about your own personal health. Remember, this survey will not be linked to you in any way.

Question 13

How would you rate your own personal health? Mean **2.7 (Very Good)**

___ Excellent ___ **Very Good** ___ Good ___ Fair ___ Poor

Question 14

Do you currently have any of the following kinds of health insurance or health care coverage?
(Choose all answers that apply.)

25.0% Health insurance *my* employer provides
23.1% Health insurance *my spouse's* employer provides
0% Health insurance *my school* provides
0.3% Health insurance *my parent or my parent's* employer provides
7.6% Health insurance I bought for myself
15.3% Medicaid
30.3% Medicare
13.5% Veteran's Administration benefits

4.4% Other: _____
9.4% I currently do not have any kind of health insurance or health care coverage

Question 15

During the past 12 months, was there any time that you did not have any health insurance or health care coverage?

10.7% Yes **87.7%** No 1.6% Don't know

Question 16

What type of medical provider(s) do you visit when you are sick?
(Choose all answers that apply.)

72.6%	Doctor's office	0%	Company nurse
2.3%	Health department	0.2%	Community or Rural Health Center
8.0%	Hospital clinic	12.4%	Urgent Care Center
20.0%	Hospital emergency room	9.6%	Other: _____
0%	Student Health Services	9.1%	Veterans-Related
0.5%	Pain Clinic	1.6%	No Response

Question 17

In what cities are the medical providers you visit located?
(Choose all answers that apply.)

0%	Ahoskie	0.3%	Franklin	0.4%	Suffolk
9.6%	Chesapeake	0%	Gatesville	2.5%	Virginia Beach
4.4%	Dare County	4.6%	Greenville	0%	Williamston
0.3 %	Edenton	14.6%	Hertford	0%	Windsor
68.8%	Elizabeth City	7.1%	Norfolk	9.4%	Other: _____
0.9%	Charlotte	0.3%	Hampton	1.6%	Moyock
2.2%	Portsmouth				

Question 18

Where do you usually get advice on your health?
(Choose all answers that apply.)

58.1%	Doctor's office	0.2%	Urgent Care Center
4.8%	Health department	21.7%	Family
1.8%	Hospital clinic	14.0%	Friends
3.9%	Hospital emergency room	4.8%	Media (television, news, radio, magazine)
0%	Student Health Services	30.6%	Internet or other computer-based info
0.2%	Company nurse	9.9%	Other: _____
0.5%	Self	0 %	Community or Rural Health Center
0.6%	Books	2.2%	Nurse Friend
1.9%	Insurance/Nurse Lines		

Question 19

About how long has it been since you last visited a doctor for a routine ("well") medical checkup? ***Do not include times you visited the doctor because you were sick or pregnant.***

71.6% Within the past 12 months
11.1% 1-2 years ago
3.5% 3-5 years ago
6.4% More than 5 years ago
7.1% I have never had a routine or "well" medical checkup
0.3% Don't know
0% No Response

Question 20

About how long has it been since you last visited a dentist for a routine ("well") dental checkup? ***Do not include times you visited the dentist because of a toothache or other emergency.***

41.3% Within the past 12 months
17.0% 1-2 years ago
14.4% 3-5 years ago
17.1% More than 5 years ago
10.2% I have never had a routine or "well" dental checkup
0% No Response

Question 21

If one of your friends or family members needed counseling for a mental health, substance abuse, or developmental disability problem, whom would you suggest they go see?
(Choose only one answer.)

7.5% Children's Developmental Services Agency/Developmental Evaluation Center
1.9% Counselor or Therapist in private practice
9.3% Doctor
0.6% Emergency Room
0.0% Employee Assistance Program
11.0% Local Mental Health Facility
10.0% Minister/Pastor
0.0% School Counselor
0.0% Vocational Rehabilitation/Independent Living
23.8% I don't know
18.8% Other: _____
7.1% No Response

Question 22

How would you rate your day-to-day level of stress?

21.6% High 30.7% Moderate **47.6%** Low 0% No Response

Question 23

In the past 12 months, how often would you say you were worried or stressed about having enough money to pay your rent/mortgage?

8.8% Always 4.3% Usually 6.9% Sometimes 14.4% Rarely **55.6%** Never

Question 24

On how many of the past 7 days did you drink alcohol of any kind? (Beer, Wine, Spirits)

8.3%	1 day	0%	5 days
14.7%	2 days	2.3%	6 days
0.8%	3 days	0.5%	7 days
9.6%	4 days	13.2%	I didn't drink alcohol on any of the past 7 days
0.3%	No response	**50.3%**	I never drink alcohol

Question 25

During that same 7-day period, how many times did you have five (5) or more alcoholic drinks (Beer, Wine, Spirits) in a single day?

27.4%	None	0%	5 times
1.1%	1 time	0%	6 times
0.3%	2 times	0%	7 times
0.4%	3 times	0%	No Response
7.1%	4 times		

Question 26

Do you smoke cigarettes?

24.9% Yes
48.4% I have never smoked cigarettes
21.4% I used to smoke but have quit
5.3% No Response

Question 27

How many cigarettes do you smoke per day? *(Choose only one answer.)*

4.3% Less than half a pack per day
16.1% Between half a pack and one (1) pack per day
2.6% One (1) pack a day
4.4% More than one (1) pack a day
1.8% Two (2) packs a day

Question 28

Are you regularly exposed to second-hand smoke from others who smoke?

18.3% Yes **81.7%** No 0% No Response

Question 29

If you answered yes to Q 28, where are you regularly exposed to secondhand smoke?
(Choose all answers that apply.)

4.6%	Public Places	0.9%	Car
8.2%	Home	0.0%	Hospital
1.0%	Workplaces	4.4%	Other: _____
0.0%	School (public, community college, university)		

Question 30

How often do you currently use smokeless tobacco (chewing tobacco, snuff, Snus®, "dip")?

91.6% Not at all 3.7% On some days 4.4% Every day 0.3% No Response

Question 31

Are you in support of establishing all county property including public parks and recreational facilities as smoke free?

77.0% Yes 21.5% No 1.6% No response

Question 32

During the past 7 days, other than your regular job, how often did you engage in physical activity for at least a half-an-hour?

10.6% None
3.0% Less than once a week
14.2% Once a week
23.3% 2-3 times a week
15.8% 4-6 times a week
33.1% Daily
0% No Response

Question 33

If you answered "none" to Q 31, why don't you engage in physical activity?
(Choose all answers that apply.)

1.1% My job is physical or hard labor
3.6% I don't have enough time for physical activity
3.5% I'm too tired for physical activity
5.5% I have a health condition that limits my physical activity
0% I don't have a place to exercise
0% Weather limits my physical activity
0% Physical activity costs too much (equipment, shoes, gym expense)
0% Physical activity is not important to me
0% Other: _____

Question 34

Which of the following physical activity resources would you utilize?
(Choose all answers that apply.)

30.7% Park/Playground
15.9% School
25.1% Church
31.5% Community Center
10.4% Senior Center
18.4% Parks & Recreation Facility
28.2% Gyms
22.3% Walking Trail
33.7% Nature Trail
19.5% Bike Trail
19.5% Canoeing
17.9% Kayaking
27.1% Walkable Communities – i.e. areas measured, deemed safe to walk, etc.
20.9% No Response

Question 35
Do you know of any schools that allow the public to use their recreational facilities after hours?

23.4% Yes **69.2%** No 7.4% No response

Question 36
How often do you visit county parks and recreation facilities?

0.3% Daily
11.7% Weekly
7.9% Monthly
21.6% Occasionally
20.6% Rarely
38.0% Never
0% No Response

Question 37
What are the top reasons you do not visit or do not visit regularly?
(Choose all answers that apply.)

0.1% No lighting
1.2% No bathrooms
0.3% Unclean
1.8% Unsafe
1.3% No drinking fountains
6.3% Not handicap accessible
11.0% Lack of shade
0.9% Lack of children's play equipment
0.3% Lack of fields or courts for sports
2.4% Lack of walking paths/tracks

1.8% Lack of biking paths
1.6% Lack of trashcans/pet waste disposal
3.9% Lack of transportation
0.4% Cost
20.3% Nothing offered of interest to me
35.5% Other: _____
13.5% No Response

Question 38

Not counting juice, how many servings of fruit do you consume in an average day?

9.3%	None	1.6%	Five
18.7%	One	0%	Six
25.4%	Two	0%	Seven
21.6%	Three	2.2%	Don't know
7.1%	Four	9.8%	No Response

Question 39

Not counting potatoes and salad, how many servings of vegetables do you consume in an average day?

6.3%	None	4.1%	Five
26.4%	One	0%	Six
33.8%	Two	2.2%	Eight
18.0%	Three	1.7%	Don't know
0.8%	Four	2.1%	No Response

Question 40

Are you within 10 miles of a grocery store, convenience store, or dollar store?

97.2% Yes 2.6% No 0.3% Don't know 0% No Response

Question 41

Are fresh fruits and vegetables readily available at these stores?

89.1% Yes 7.8% No 0.3% Don't know 0% No Response

Question 42

Are you within ten miles of a farmers market or roadside, produce stand?

71.5% Yes 13.7% No 14.8% Don't know 0% No Response

Question 43

If yes, during the months open how often do you visits?

4.4% Daily
13.4% Weekly
16.9% Monthly
14.2% Occasionally

1.6% Rarely
21.1% Never
0% No Response

Question44

What are the primary reasons you do not visit or do not visit regularly?
(Choose all answers that apply.)

2.6% Lack of transportation
9.9% Too expensive
1.9% I do not eat fruits and vegetables
0.8% I do not know the locations and hours of operation
0.4% I am working during hours of operation
0% Does not accept EBT or WIC
4.5% I have my own garden
20.0% Other: _____
0.1% Don't want to
7.4% No Response

Question 45

On average, how many meals a week do you eat out?

Mean: **2.5** Meals eaten out each week

Question 46

Have you ever been told by a doctor, nurse, or other health professional that you have any of the following?

Asthma	25.5% Yes	**74.5%** No
Depression	28.3% Yes	**71.7%** No
Diabetes	24.8% Yes	**75.2%** No
High blood pressure	38.1% Yes	**61.9%** No
High cholesterol	34.1% Yes	**65.9%** No
Mental Illness	15.1% Yes	**84.9%** No
Overweight/obesity	26.4% Yes	**73.6%** No
Heart Disease	21.9% Yes	**78.1%** No
Cancer	17.1% Yes	**82.9%** No

Question 47

What year were you born? Mean Age: **51.4**

Age Groups:

0.2%	<=18	14.0%	>58-68
3.9%	>18-28	12.0%	>68-78
31.6%	>28-38	9.8%	>78-88
8.6%	>38-48	0%	>% 88-98
19.8%	>48-58		

Question 48

Are you male or female? 34.1% Male **65.9%** Female

MEN'S HEALTH QUESTIONS. Answer the following two questions only if you are a man age 40 or older. *(If you are a man, but younger than age 40, skip to question 59. If you are a woman, skip to question 52.)*

Question 49

Do you get an annual prostate exam?

14.9% Yes 14.6% No 0% No Response

Question 50

If you answered no to Q 49, what was the main reason you did not get an annual prostate exam? *(Choose only one answer.)*

4.6% Lack of Information (Didn't know about/Couldn't locate information about it)
0.4% Cost (Too expensive or provider wouldn't accept my insurance)
0% Service Not Available (It took too long to get an appointment; you didn't meet the eligibility requirements; provider wasn't taking new patients or enrollees; had inconvenient location or hours of operation)
0% Language or Cultural Barrier (This service was not sensitive to my language or cultural needs)
0.2% Lack of Transportation (Don't have access to an automobile or public transportation; don't know anyone who could give me a ride.)
3.3% Instructed by a health professional that an annual prostate exam was not necessary
5.5% Other
0.6% Don't Know

Question 51

How long has it been since your last prostate exam?

8.0% Within the past 12 months
10.4% 1-2 years ago
4.4% 3-5 years ago
1.4% More than 5 years ago
0% I don't know/don't remember
5.4% I have never had a prostate exam

WOMEN'S HEALTH QUESTIONS. Answer the following four (4) questions only if you are a woman.

Question 52

If you are age 40 or older, do you get a mammogram annually?

24.1% Yes 14.4% No 7.2% Under age 40 0% No Response

Question 53

If you answered no to Q 52, what was the main reason you did not get an annual mammogram?
(Choose only one answer.)

0.9% Lack of Information (Didn't know about/Couldn't locate information about it)
1.6% Cost (Too expensive or provider wouldn't accept my insurance)
0% Service Not Available (It took too long to get an appointment; you didn't meet the eligibility requirements; provider wasn't taking new patients or enrollees; had inconvenient location or hours of operation)
0% Language or Cultural Barrier (This service was not sensitive to my language or cultural needs)
0% Lack of Transportation (I don't have access to an automobile or public transportation; I don't know anyone who could give me a ride.)
8.7% Instructed by a health professional that an annual mammogram was not necessary
3.2% Other

Question 54

How long has it been since your last mammogram?

18.3% Within the past 12 months
5.0% 1-2 years ago
11.7% 3-5 years ago
1.7% More than 5 years ago
0% I don't know/don't remember
7.1% I have never had a mammogram
0.7% No response

Question 55

Do you get a Pap test at least every 1-3 years?

41.0% Yes 24.9% No 0% No Response

Question 56

If you answered no to Q 55, why don't you get a pap test at least every 1-3 years?
(Choose only one answer.)

0% Lack of Information (Didn't know about/Couldn't locate information about it)
2.3% Cost (Too expensive or provider wouldn't accept my insurance)
0% Service Not Available (It took too long to get an appointment; you didn't meet the eligibility requirements; provider wasn't taking new patients or enrollees; had inconvenient location or hours of operation)
0% Language or Cultural Barrier (This service was not sensitive to my language or cultural needs)
0% Lack of Transportation (I don't have access to an automobile or public transportation; I don't know anyone who could give me a ride.)
16.5% Instructed by a health professional that a pap test every 1-3 years was not necessary
6.2% Other

Question 57

How long has it been since your last Pap test?

30.0% Within the past 12 months
13.7% 1-2 years ago
10.6% 3-5 years ago
10.0% More than 5 years ago
1.6% I don't know/don't remember
0% I have never had a pap test

Question 58

FOR MEN AND WOMEN: If you are a man or woman age 50 or older, have you ever had a test or exam for colon cancer?

28.5% Yes 26.1% No 10.0% Under age 50 0.4% No response

PART 5: Adolescent Behavior (ages 9-17)

Question 59

Do you have children between the ages of 9 and 17 for which you are the caretaker? (Includes step-children, grandchildren, or other relatives.)

5.1% Yes **94.2%** No 0.0% No response

Question 60

Which of the following health topics do you think your child (ren) needs more information about? *(Read list. Allow time for a yes or no following each item. Choose all answers that apply.)*

3.5%	Nutrition	2.6%	Gang violence
3.4%	Physical Activity	0.8%	Reckless driving/speeding
1.7%	Sex	0.4%	Eating disorder (e.g. anorexia or bulimia)
0.6%	Tobacco	0.8%	Mental Health issues (depression, anxiety)
0.7%	Asthma Mgmt	0.7%	Suicide Prevention
0.6%	Diabetes Mgmt	1.5%	Substance Abuse (alcohol/drugs)
0.8%	Overweight/Obesity	0.7%	STDs including HIV
1.3%	First Aid/CPR	0%	Other: _____
0%	My child does not need information on any of the above topics		

PART 6: Emergency Preparedness

The next seven questions ask about how prepared you and your household are for an emergency.

Question 61

Does your household have working smoke and carbon monoxide detectors?
(Choose only one answer.)

62.3%	Yes, smoke detectors only	1.6%	Yes, carbon monoxide detectors only
35.7%	Yes, both	0.4%	No

Question 62

Does your household have a Family Emergency Plan?

63.5% Yes 36.5% No 0% No Response

Question 63

Are there members of your family with special needs (homebound, bedridden, handicapped, etc.) who will need additional assistance in the event of an emergency, large-scale disaster, or evacuation?

20.6% Yes **77.8%** No 1.6% No Response

Question 64

Does your household have a basic emergency supply kit? If yes, how many days do you have a supply for? These kits can include; water and non-perishable food, any necessary prescriptions, battery powered or hand crank weather radio, first aid supplies, flashlight, and batteries, etc.

50.0%	No	6.2%	2 weeks
26.3%	3 days	4.0%	More than 2 weeks
18.1%	1 Week	4.4%	Don't know

Question 65

What would be your main way of getting information from authorities in a large-scale disaster or emergency?

42.0%	Television	2.8%	Text message (emergency alert system)
31.3%	Radio	10.8%	Other: _____
6.4%	Internet	0%	Don't know
0%	Print media (ex: newspaper)	1.8%	All of the above
1.6%	Neighbors	4.4%	Phone
0.7%	Social networking site (i.e. Facebook)		
0.2%	TV, Radio, Scanner		
4.6%	County Reverse 911/Emergency Alert Phone System		

Question 66

If public authorities announced a mandatory evacuation from your neighborhood or community due to a large-scale disaster or emergency, would you evacuate?

74.1% Yes 18.7% No 7.2% Don't know 0% No Response

Question 67

What would be the main reason you might not evacuate if asked to do so?
(Choose only one answer.)

1.6%	Lack of transportation
4.9%	Lack of trust in public officials
8.9%	Concern about leaving property behind
1.6%	Concern about personal safety
0.2%	Concern about family safety
4.7%	Concern about leaving pets

12.0% Concern about traffic jams and inability to get out
0.0% Can't afford to evacuate (gas, hotel stay, eating out)
18.8% Other: _____
8.5% Don't know

PART 7: Demographics

Please answer this next set of questions so we can see how different types of people feel about local health issues.

Question 68

Do you work or go to school outside of Pasquotank County?

14.9% Yes **85.1%** No 0% No Response

Question 69

What is your race or ethnicity? *(Choose only one answer.)*

14.8% African American/Black
4.4% Asian/Pacific Islander
0.0% Hispanic/Latino
1.1% No response
79.7% Caucasian/White
0.0% Native American
0.0% Other: _____

Question 70

What is your marital status?

57.9% Married
2.3% Separated
19.1% Never married
0% Other: _____
10.5% Widowed
9.9% Divorced
0.3% No response

Question 71

What is the highest education level you have completed? *(Choose only one answer.)*

2.5% Less than 9th grade
9.9% 9th-12th grade, no diploma
41.0% High school graduate (or GED/equivalent)
11.2% Associate's Degree or Vocational Training
11.3% Some college (no degree)
10.4% Bachelor's degree
13.7% Graduate or professional degree
0% Other: _____

Question 72

What is your employment status? *(Choose all answers that apply.)*

2.9%	Employed full-time	17.7%	Disabled; unable to work
36.7%	Employed part-time	14.4%	Student
10.1%	Unemployed	0%	Homemaker
28.5%	Retired	0.5%	No Response

Question 73

What was your total household income last year, before taxes? (*This is the total income, before taxes, earned by all people over the age of 15 living in your house*.)

15.3% Less than $20,000
19.6% $20,000 to $29,999
11.7% $30,000 to $49,999
14.9% $50,000 to $74,999
8.6% $75,000 to $100,000
9.5% Over $100,000
11.3% No Response
8.8% Don't know

Question 74

How many individuals live in your household? Mean **2.8**

Question 75

Do you have access to the internet?

68.7% Yes 29.7% No 1.6% Don't know/not sure 0% No Response

THE END!

Thank you very much for completing the Community Health Survey!

Pasquotank County Stakeholder Survey Results

Conducting stakeholder surveys is an important part of the Community Health Assessment (CHA) process and ensures that we engage formal and informal leaders of the community in learning and understanding the needs of individuals, as well as the health status of our communities as a whole. Stakeholder surveys were included in our 2013 CHA process in addition to the Community Health Opinion surveys. This process helps identify and evaluate health issues in each respective county.

Stakeholder surveys were referred to as key informant interviews in our 2010 CHAs. The CHA Leadership Team decided to conduct these surveys via Survey Monkey as opposed to conducting a phone interview as used in the 2010 process in hopes to increase participation. Self-administered surveys can be completed at the convenience of the respondent, and provides anonymity that allows people to be honest without fear of judgment.

Stakeholders were identified by members of our Healthy Carolinians Partnerships and CHA Leadership Team. Potential participant representation included agencies and organizations in key sectors of the community such as; local health and human services, business, education, law enforcement, local hospitals, civic groups including churches, and government. An invitation to participate was sent by e-mail to 23 stakeholders and 10 completed a survey in the month of February 2013. Some participants work in several counties (regional); their responses are included in each county they listed.

Survey data was initially recorded in narrative form in Microsoft Word. Themes in the data were identified and representative quotes were drawn from the data to illustrate the themes. All participating stakeholders were assured that their responses would not be associated with them as an individual, or any organization being represented. Therefore, responses are grouped by question and are in no particular order. Some quotes may have been altered slightly to preserve confidentiality. These responses are strictly the opinion of the participants; they have not been researched for accuracy.

Survey Questions and Responses:

1. Describe the services your agency provides for county residents and describe the residents who currently are most likely to use your services.

- Provides shelter, counseling, court/personal advocacy, 24 hour crisis line, children's services displaced homemaker services and information and referral; serving primary and secondary victims of domestic or sexual violence.

- Provides research-based educational programs based on the needs of the community and citizens; educational opportunities are also offered in the areas of agriculture, nutrition, finances, food safety and other areas to meet the needs of the citizens; serving families of all ages, gender, race, income levels, etc.
- Provides Medicaid; Food & Nutrition benefits; TANF; Crisis, Emergency Assistance; LIEAP; Adult & Child Services; Fishing Licenses; Work Permits; Voter Registration; Employment Services and services for the Blind affiliate; serving all ages, gender, race, low to middle income
- Provides all mandated state and federal social services programs; serving all ages, races and genders fairly equally with majority under 200% of the poverty level.
- We are a Pre-K – 12th grade public school system; serving students who are between the ages of 3-21.
- Provides power, trash pickup, water, all infrastructures; serving all city residents and some county residents.
- Provides parenting support; child care subsidies; coaching/assistance to child care providers; serving parents (generally mothers) of children under age six, parents of children with special needs, parents of children in child care programs, low income families seeking support to pay for child care; racial make-up generally reflects the counties where people live.
- Provides food and grocery items to more than 150 501c3 and faith based partners that help hungry men, women and children; serving primarily low-income, disabled, and working poor from all demographics.
- Provides local government counseling; serving cities, towns, and counties
- Provides response, recovery, mitigation and preparedness (planning education); serving elderly (special needs) but also work with schools, child care agencies – there really is no specific age, gender, race, etc.

2. In the PAST 5 YEARS, have there been any changes in the composition of the people who use your services? If yes, please describe.

- The composition of people seeking emergency food has grown by 48% over the past five years due to the poor economic climate.
- There have not been any changes in the composition of people who use our services.
- Increased caseloads in Medicaid and Food and Nutrition Services
- Yes, we see more middle income clients coming in for services because the economy and housing market is suffering and they need help.

3. What do you think are the barriers residents encounter in accessing your services?

- Transportation is a barrier for rural NENC residents followed by access. Emergency food programs tend to serve when people are traditionally working.
- Having accurate knowledge about services and feeling safe enough to access them
- Some county residents have to call to get directions to our facility.
- Transportation
- Lack of wealth – they are poor

- Sometimes our services are limited due to the amount of funding we have. Sometimes people simply don't know about our services.
- None – most clients know exactly what we offer and what to ask for

4. What does your agency do to try to meet the special needs of people who use your services (e.g. language/cultural issues, cost, transportation, etc.)?

- There is no cost for our services; we assist with transportation on a case by case basis and we work to accommodate needs of all clients as much as we possibly can
- Programs offered are free or a minimum fee is charged to help cover cost of materials. Materials are provided to cover language and cultural issues if possible.
- We are required to provide language interpreters, translation services, deaf and hard of hearing services and any accommodations needed for any reason, requests as required by the ADA.
- Refer to ICPTA
- Except for some trainings, all of our services are free of charge. We provide some services in-home/on-site so there are no transportation costs. We provide child care and meals at some events to make attendance easier for families. We do not have funds to have a dedicated bilingual person.
- There is no cost for our services; we offer information in Spanish and Vietnamese; during times of evacuation we work with other agencies to provide for transportation to shelters
- We have a full continuum of services for students with special needs.
- Have different locations where they can access services – weatherize homes, etc.
- Usually deal with elected officials boards so not an issue.
- In 2008, we launched a mobile food pantry program to enable more people in rural areas to have greater access to food. The program has been tremendously successful. This program model has been the springboard to provide value added services to the recipients by partnering with the local health department, NC Cooperative Extension Services, and social services.

5. Is there anything else you would like to share about your organization?

- In addition to the work with the citizens in the county, we collaborate with schools, clubs, and various organizations to meet the needs of the county.
- We are always looking for opportunities to collaborate with community.

6. What services/programs are needed that are not currently available?

- Better healthcare (more doctors and wider range of medical procedures available locally)
- Public transportation is always an issue, also there needs to be more effective ways of linking available services with those needing these services.
- More affordable after-school and summer youth activities; additional resources for adults needing prescription drugs or Medicare care for those who are just above the income guidelines to receive services

- More child care money; better transportation services; free clinics for medical and dental; more jobs; more job specific training; more housing; affordable housing
- More parenting programs
- None – we are legally obligated to provide a Free Appropriate Public Education. Resources are scarce, however, and we do struggle.
- We need a shelter for the homeless; we need job training services; we need public transportation system that runs a specific route to major areas; we need a real farmers market to provide greater access to healthy fruits and vegetables
- More parenting; more services to support health and nutrition of young children; drop-in child care
- Shopping facilities: clothing and grocery

7. Overall, what would you consider to be the county's greatest strength?

- Agencies that provide emergency response and recovery services - coordinate, train, and work together to enhance services to ensure the needs of the citizens are being met.
- Its willingness to come together to address problems – it is a very caring community
- The greatest strength in the county are the number of higher education institutions, the hospital, health department, and access to medical care for those with insurance.
- Close to Virginia
- Close community
- Its diversity
- Location and great people
- The university and community college system seem to be focusing on the future success of NENC and its residents.

8. What do you fee are the major challenges faced by the county?

- Affordable health care; affordable/quality housing and jobs
- Diversity in its many forms is both an asset and a challenge in our community; of course money to address community needs is also major.
- Availability of youth activities; special care physicians; affordable dental care
- We need better leadership and they need to be concerned with current issues, not just the good old boys club that we have had for so long in this county.
- Economic
- Its diversity; we are an impoverished county; people are not committed to good health
- Lack of jobs
- I think limited funding or budget crisis cause people to think that any improvement is impossible to achieve.
- Poverty/few high paying jobs; lack of recognition that there may be solutions for family concerns; poor schools
- Education improvement; diversification of jobs; poverty

9. Looking specifically at health, what do you think are the most important health problems/health concerns in the county?

- Poor eating habits (resulting in high blood pressure, obesity, high cholesterol, etc.); substance abuse
- Not enough doctors, especially primary care physicians
- High blood pressure; stroke; cancer; diabetes
- Lack of nutrition education at an early age; diabetes; weight; blood pressure problems
- Obesity
- Obesity
- Obesity – lack of primary care doctors
- In a word "OBESITY"
- Childhood obesity/adult obesity
- Increase in cancer; lack of affordable transportation for most of the elderly

10. What factors do you believe are causing these health problems or concerns?

- Poor eating habits – lifestyle (busy families – easy to eat, fast good), cultural, and traditional cooking methods; substance abuse – depression, lack of direction – motivation
- Doctors are attracted to the area
- Lack of participation in educational programs and implementation of preventive methods for health problems
- Lack of education; low income; lack of participation in developing programs such as community gardens, and other programs that could be put in place with help from our leaders
- Overeating and lack of exercise
- People not committed to good health - failure to exercise, eating too much (buffets), and eating way too much junk food
- Poverty and lack of education
- 1 in 5 residents live at or below the poverty level. Having limited financial resources creates the perfect storm. They buy filling foods high in carbohydrates and sugar and low in nutritional value because that is what they can afford. The problem we have in this region is that there is a limited supply of jobs that pay a living wage and provide health insurance which equates to a better quality of life.
- High cost of healthy foods
- Unknown

11. What do you think could be done to solve or overcome these health problems or concerns?

- Education; training
- I truly do not know
- Continuation of educational programs; increased marketing of the available programs and resources

- Elect new leadership and officials with forward thinking and motivation to make changes and educate
- Affordable programs/activities being offered to get people “moving”
- Education; more opportunities for physical exercise (biking and walking trails in the immediate area)
- Provide jobs
- Education and jobs
- More farmers markets
- More research

12. Please rate the following statements:

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
There is a good healthcare system in the county	**1**	**5**	**2**	**2**	
The county is a good place to raise children.	**3**	**4**		**3**	
The county is a good place to grow old.	**4**	**3**	**1**	**2**	
There are plenty of ways to earn a living in the county.	**1**	**1**	**1**	**2**	**5**
The county is a safe place to live.	**1**	**7**	**1**	**1**	
There is plenty of support for individuals and families during times of stress and need in the county.		**6**		**4**	
The county has clean air.	**3**	**6**	**1**		
The county has clean water.	**3**	**4**	**3**		
Comments:					

Numbers represent the number of responses for each statement.

13. Additional thoughts or comments:

- Keep asking for feedback from the community