

Albemarle Regional Health Services, Vidant
Chowan Hospital and Albemarle Health

2013 Perquimans County Community Health Assessment

May, 2013



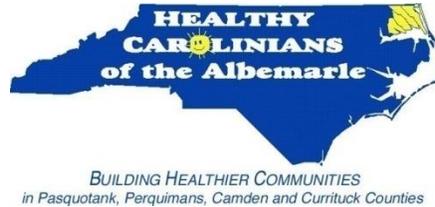
ALBEMARLE REGIONAL HEALTH SERVICES
Partners in Public Health



VIDANT HEALTH™



A Vidant Health Partner



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, Vidant Chowan Hospital, 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.

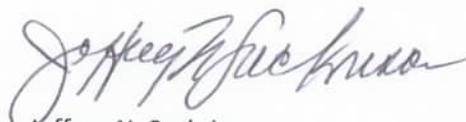
Best of health,



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



Wick Baker
President
Albemarle Health



Jeffrey N. Sackrison
President
Vidant Chowan Hospital

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/Jacqueline 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 Hospital (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 Perquimans County, the local Healthy Carolinians coalition is Healthy Carolinians of the Albemarle, which also includes Camden, Currituck, and Pasquotank 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 Perquimans 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 Perquimans County residents, the consultant tapped numerous readily available secondary data sources. For data on Perquimans 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 Perquimans County Department of Social Services; Perquimans County Schools; and other Perquimans 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 Perquimans County. Other important local health data sources included ARHS, and Perquimans County Emergency Medical Services.

Because in any community health assessment it is instructive to relate local data to similar data in other jurisdictions, Perquimans County data is compared to like data describing the state of NC as a whole, as well as to data from Pamlico 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 Perquimans 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 Perquimans 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

Perquimans County is located in the Coastal Plain region of NC, in the northeastern part of the state. Flat plains and shallow stream valleys characterize the county. Covering a total area of 329 square miles, Perquimans consists of 247 square miles of land, with the remaining 82 square miles covering water. The county contains miles of waterfront along the Perquimans River, the Little River, and the Albemarle Sound. Perquimans County is adjacent to Pasquotank County on the east, Chowan County on the southwest, and Gates County on the northwest (1,2).

The major town in the county is Hertford, which is also the county seat. Perquimans County is located 52 miles southwest of metropolitan Norfolk, VA, 152 miles east of Raleigh, NC, 195 miles northeast of Wilmington, NC, and is roughly 40 miles west of the Outer Banks of NC (2).

US Highway 17 runs through Hertford northeast (toward the Outer Banks) and southwest (towards Wilmington, NC), joining US 64. NC Highway 37 runs northwest and leads towards the state of VA. The nearest major interstate to the county is I-95, which is 60 miles to the west (3).

Norfolk International Airport is located 65 miles from Hertford in Norfolk, VA. Also within 100 miles from Hertford are: Pitt-Greenville Airport (Greenville, NC), and the Newport News/Williamsburg International Airport (Newport News, VA). The Coastal Carolina Regional Airport in New Bern, NC is 106 miles from Hertford. Also, US Highway 64 provides access to the Raleigh-Durham International Airport 165 miles to the west. There are three Amtrak stations within a 100 miles radius of Hertford. The closest is in Norfolk, VA (46 miles), followed by Newport News, VA (58 miles) and Williamsburg, VA (76 miles). Greyhound has two bus stations nearby, both in NC. The Edenton station is the closest, followed by the one in Elizabeth City (4,5,6).

Perquimans County gets approximately 49 inches of rain per year, 3 inches of snow, and has an average of 213 sunny days per year. The average high temperature in July is 89 degrees and the average low in January is 31 degrees (7).

Figure 1. Map of Perquimans County



HISTORY

The earliest inhabitants of what is now Perquimans County were the Yeopim Indians. It is from them that Perquimans got its name, meaning "Land of Beautiful Women". Kilcocanen, King of the Yeopim, deeded Perquimans County to George Durant, one of the first settlers in what is present-day Perquimans County, in 1661. Although Englishmen began permanent settlements in this region about 1650, Perquimans County was not formed until 1668. Today Perquimans County covers 261 square miles of lowland between the Albemarle Sound and the Dismal Swamp. Communities and townships within the region include Hertford, Winfall, Chapanoke, Belvidere, Durants Neck and Snug Harbor. By the early 1700s farming, livestock and fur trade had become major industries in the region (8,9,10).

Early on, the Quakers were a strong influence in Perquimans County and even in early colonial politics. George and Edmundson Fox traveled to the Carolinas during the 1670s and were responsible for establishing several churches in the state. In 1672, the Fox brothers organized the first religious meeting that residents in the county had ever experienced. The brothers were not happy about the lack of civility and religion they encountered among the people at Hertford, and Edmundson later met with the governor and other regional officials. The result was that most of the politicians converted to Quakerism and the first church in the state was built not long after. The influence of the Quakers remained evident throughout Perquimans County until the end of the Cary Rebellion (the result of a power struggle among the southern precincts because they all sought equal representation along with Cary's main cause to protect the fur trade in Bath county) in the early 1700s (9,10).

The early history of Perquimans County includes several rebellions which took place in addition to the Cary Rebellion. There was a political dispute which led to Culpepper's Rebellion in 1677. In 1663, George Catchmade received a grant from Lord Proprietor William Berkeley and organized groups to "settle and seat" the land that Durant had allocated from the Yeopim tribe. As these immigrants under Catchmade began to arrive, tensions arose and led to the arrest of George Durant and Zachary Gillam. John Culpepper organized a group of citizens in protest and both men were freed. The governor, Thomas Miller, was imprisoned by the traitors, and this is what led to the start of the rebellion. A new council was elected in 1678, making Durant and Gillam advocates to the English proprietors, along with Seth Sobel. Sobel became acting governor of Albemarle County, but was captured by Turk pirates. Although eventually released, he became an oppressive ruler and was arrested and sent away from Perquimans in 1689. With his departure, the rebellion died away and Durant and his council remained in charge (10).

Hertford, one of the oldest towns in NC, was established as the county seat of Perquimans County in 1758. It dates back to a 1669 land grant and was originally known as Phelps Point, as the land was owned by Jonathan Phelps. It was named Hertford for the NC governor's political patron, the Earl of Hertford. In the 1900s, Hertford was a busy lumber town. This was largely due to the Perquimans River, which provided a direct link between the railroads, lumber barges and commercial ships that traversed the Albemarle Sound and nearby Intracoastal Waterway. During World War II, Hertford was bustling with activity from the nearby Harvey Point Naval Air Station. Agriculture remains one of the principal industries of the area today with corn, peanuts, and soybeans as major crops (9).

The county boasts four National Register Historic Districts: Hertford National Register Historic District, Belvidere National Register Rural Historic District, Old Neck National Register Rural Historic District, and Winfall National Register Historic District. In Hertford, a picturesque and

well-preserved quintessential small town, you will find antique shops, cafes and friendly folks. Seventy-five percent of the buildings in Hertford contribute to the town's historic district designation. The handsome Queen Anne and Colonial Revival style homes are a reflection of the prosperity of the region during the late 19th century. A tour book of the Downtown Historic Tour and the Rural Tour of Plantations is available at the Visitor's Center and includes maps of self-guided walking and driving tours. Belvidere offers a pristine agricultural setting and is rich in Quaker heritage and history. The Piney Woods Meetinghouse is found there and is a successor to the first Friends Meeting, making it the oldest religious congregation in North Carolina. Belvidere remains predominantly Quaker today. Old Neck has rural landscape reminiscent of the antebellum south. Dating back to 1663, the Old Neck Historic District is one of America's earliest English settlements. Today, it is primarily open farmland, but is still home to five major plantation homes and numerous smaller houses and farms. Lastly, Winfall was the busiest crossroads in Perquimans County before the bridge crossed the Perquimans River and was the commercial center for those on the north side of the river, even before the Civil War (9).

In addition to the Historic Districts and the offerings of the town of Hertford, the county is noted for its nearly 100 miles of shoreline which attracts hunters, fisherman, and boaters to Perquimans. Also offered annually are The Perquimans County Indian Summer Festival, the Spring Fling and Old-Timers Game, and the Hearth and Harvest Festival (10).

POPULATION CHARACTERISTICS

General Population Characteristics

The following general population characteristics of Perquimans 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 Perquimans County was 13,453.
- There was a higher proportion of females than males in Perquimans County: 52.1% vs. 47.9%.
- The overall median age in Perquimans County was 46.4 years, 4.4 years older than the median age for the seven-county ARHS region but 1.9 years younger than for Pamlico County, an assigned peer county. The median age in Perquimans County was 9.0 years older 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
Perquimans County	13,453	6,446	47.9	45.7	7,007	52.1	47.1	46.4
<i>Regional Average</i>	19,416	9,517	49.0	40.7	9,900	51.0	43.2	42.0
Pamlico County	13,144	6,710	51.0	46.6	6,434	49.0	49.8	48.3
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

Perquimans County is divided into five townships: Belvidere Township, Bethel Township, Hertford Township, New Hope Township, and Parkville Township. The following population information was derived from 2010 US Census data presented in Table 2.

- Bethel Township was the largest township by population in Perquimans County, accounting for almost 29% of the county's population.
- New Hope Township was the second-largest township in Perquimans County, with 22% of the county's population.
- Belvidere Township was the smallest township in Perquimans County, and was home to only about 10% of the overall county population.
- Hertford Township was the youngest township in the county in terms of median age: 41.3 years.
- Bethel Township was the oldest township in the county, with a median age of 54.3 years.

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

Township	No. of Persons	% of County Population	Median Age
Belvidere Township	1,302	9.7	44.5
Bethel Township	3,848	28.6	54.3
Hertford Township	2,601	19.3	41.3
New Hope Township	3,005	22.3	45.6
Parkville Township	2,697	20.0	42.3
Perquimans County Total	13,453	100.0	46.4

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 population county and population projections from 1980 through 2030. From this data, it appears that the Perquimans County population has been growing since 2000, and that population growth is expected to continue through 2030, although at an increasingly slower pace.

**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
Perquimans County	9,486	10,447	10.1	11,368	8.8	13,453	18.3	14,868	10.5	16,252	9.3
Regional Average	13,908	14,941	7.4	16,550	10.8	19,416	17.3	20,096	3.5	20,772	3.4
Pamlico County	10,398	11,368	9.3	12,934	13.8	13,144	1.6	13,581	3.3	14,005	3.1
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.

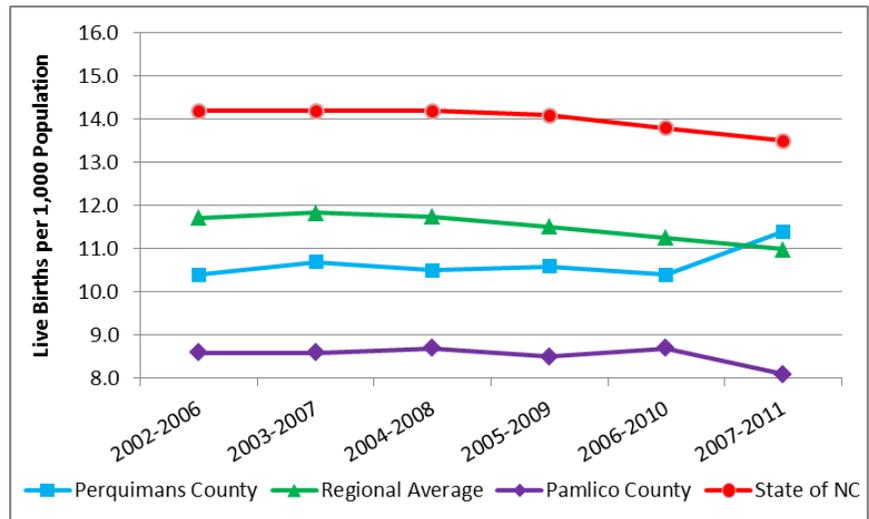
Source: Log Into North Carolina (LINC) Database, Topic Group Population and Housing, Total Population, Population (Data Item 5001); http://data.osbm.state.nc/pls/linc/dyn_linc_main.show.

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 increased recently in Perquimans County but not in the comparator jurisdictions.

- In Perquimans County, the birth rate increased 10% between 2006-2010 and 2007-2011, from 10.4 to 11.4 live births per 1,000 population. This was the first significant increase since 2002-2006.
- In Pamlico County, the ARHS region, and the state of NC, the birth rate declined overall between 2002-2006 and 2007-2011.
- The birth rate for NC exceeded the comparable rates in the other jurisdictions for every period cited.

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 Perquimans County population appears to be *increasing* in density, as it is in the comparator jurisdictions. In all periods cited, Pamlico County was the least densely populated jurisdiction among those being compared (Table 4).

Table 4. Decadal Population Density (1980-2030)

Location	Persons per Square Mile					
	1980	1990	2000	2010 (Estimate)	2020 (Projection)	2030 (Projection)
Perquimans County	38.50	42.26	45.99	51.83	55.96	59.21
Regional Average	50.91	55.99	62.72	75.55	86.94	94.46
Pamlico County	30.52	33.74	38.39	39.82	41.49	42.41
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 Perquimans County is slightly less racially diverse than the population in the ARHS region overall and NC as a whole, but more diverse than the population in Pamlico County. According to data in Table 5 from the 2010 US Census, the non-white population in Perquimans County was approximately 28% of the total population, compared to 36% in the region and 32% in NC. The non-white population in Pamlico County was 24% of the total population there.

According to data in Table 5, in Perquimans County:

- Whites composed 72.1% of the total population; regionally the comparable figure was 63.7% and statewide the figure was 68.5%.
- Blacks/African Americans composed 24.9% 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 0.3% of the total population; regionally the comparable figure was 0.7% and statewide the figure was 2.3%.
- Hispanics/Latinos of any race composed 2.1% 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.	%
Perquimans County	13,453	9,694	72.1	3,347	24.9	41	0.3	40	0.3	157	1.2	174	1.3	286	2.1
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
Pamlico County	13,144	10,032	76.3	2,632	20.0	77	0.6	61	0.5	163	1.2	179	1.4	412	3.1
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 Perquimans County was derived from 2010 US Census data presented in Table 6.

- All townships in Perquimans County were predominately white.
- Hertford Township was the township with the largest *number* of Black/African Americans, 932; this figure represented 6.9% of the total county population and 27.8% of all Black/African American persons in the county.
- Bethel Township was the township with the largest *number* of whites, 2,982; this figure represented 22.2% of the total county population and 30.8% of all the white persons in the county.
- Hertford Township was the township with the largest *number* of Hispanics/Latinos, 122; this figure represented 0.9% of the total county population and 42.7% of all Hispanic/Latino persons in the county.

Table 6. Population by Race/Ethnicity, by Township, Perquimans 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.	%	
Belvidere Township	1,302	1,043	7.8	238	1.8	0	0.0	2	0.0	4	0.0	15	0.1	18	0.1	
Bethel Township	3,848	2,982	22.2	770	5.7	15	0.1	6	0.0	32	0.2	43	0.3	57	0.4	
Hertford Township	2,601	1,537	11.4	932	6.9	7	0.1	9	0.1	84	0.6	32	0.2	122	0.9	
New Hope Township	3,005	2,387	17.7	515	3.8	17	0.1	15	0.1	20	0.1	51	0.4	53	0.4	
Parkville Township	2,697	1,745	13.0	892	6.6	2	0.0	8	0.1	17	0.1	33	0.2	36	0.3	
Perquimans County Total	13,453	9,694	72.1	3,347	24.9	41	0.3	40	0.3	157	1.2	174	1.3	286	2.1	

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 Perquimans County population was derived from 2010 US Census data presented in Table 7. Generally, these data demonstrate that Perquimans County had a population distribution skewed older than the distribution for the state as a whole.

- In terms of both numbers (1,083) and percent (8.1%), the largest segment of the population in Perquimans County was the age group 60-64. 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 three age groups younger, 45-49.
- Persons 65 years of age or older composed 21.5% of the population in Perquimans County, but 12.8% of the population of NC.
- Persons 19 years of age and younger composed 22.6% of the population in Perquimans County, but 26.8% of the population of NC.
- In Perquimans County, females consistently outnumber males in every age group 20-24 and older. In NC, a similar trend begins later, at age 45-49.

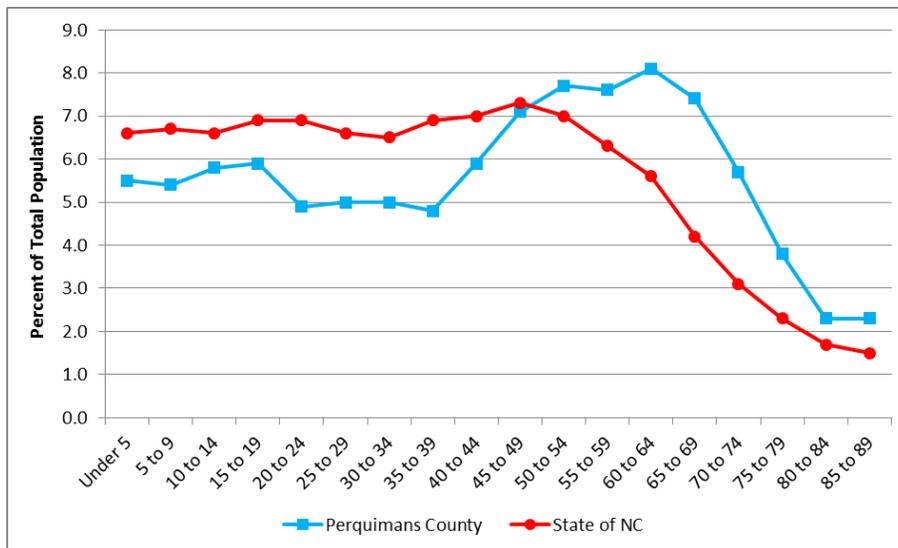
Table 7. Population Distribution by Age and Gender, Number and Percent (2010 US Census)

Age Group	Perquimans 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	13,453	6,446	7,007	100.0	47.9	52.1	9,535,483	4,645,492	4,889,991	100.0	48.7	51.3
Under 5	745	371	374	5.5	2.8	2.8	632,040	322,871	309,169	6.6	3.4	3.2
5 to 9	727	343	384	5.4	2.5	2.9	635,945	324,900	311,045	6.7	3.4	3.3
10 to 14	785	404	381	5.8	3.0	2.8	631,104	322,795	308,309	6.6	3.4	3.2
15 to 19	788	398	390	5.9	3.0	2.9	659,591	338,271	321,320	6.9	3.5	3.4
20 to 24	659	321	338	4.9	2.4	2.5	661,573	336,648	324,925	6.9	3.5	3.4
25 to 29	669	326	343	5.0	2.4	2.5	627,036	311,499	315,537	6.6	3.3	3.3
30 to 34	667	327	340	5.0	2.4	2.5	619,557	304,807	314,750	6.5	3.2	3.3
35 to 39	644	308	336	4.8	2.3	2.5	659,843	324,681	335,162	6.9	3.4	3.5
40 to 44	790	372	418	5.9	2.8	3.1	667,308	329,652	337,656	7.0	3.5	3.5
45 to 49	949	442	507	7.1	3.3	3.8	698,753	341,432	357,321	7.3	3.6	3.7
50 to 54	1,033	501	532	7.7	3.7	4.0	669,893	323,702	346,191	7.0	3.4	3.6
55 to 59	1,027	481	546	7.6	3.6	4.1	600,722	285,244	315,478	6.3	3.0	3.3
60 to 64	1,083	522	561	8.1	3.9	4.2	538,039	255,034	283,005	5.6	2.7	3.0
65 to 69	998	471	527	7.4	3.5	3.9	403,024	188,125	214,899	4.2	2.0	2.3
70 to 74	765	369	396	5.7	2.7	2.9	294,543	133,021	161,522	3.1	1.4	1.7
75 to 79	506	255	251	3.8	1.9	1.9	223,655	94,981	128,674	2.3	1.0	1.3
80 to 84	309	137	172	2.3	1.0	1.3	165,396	63,573	101,823	1.7	0.7	1.1
85 and older	309	98	211	2.3	0.7	1.6	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>.

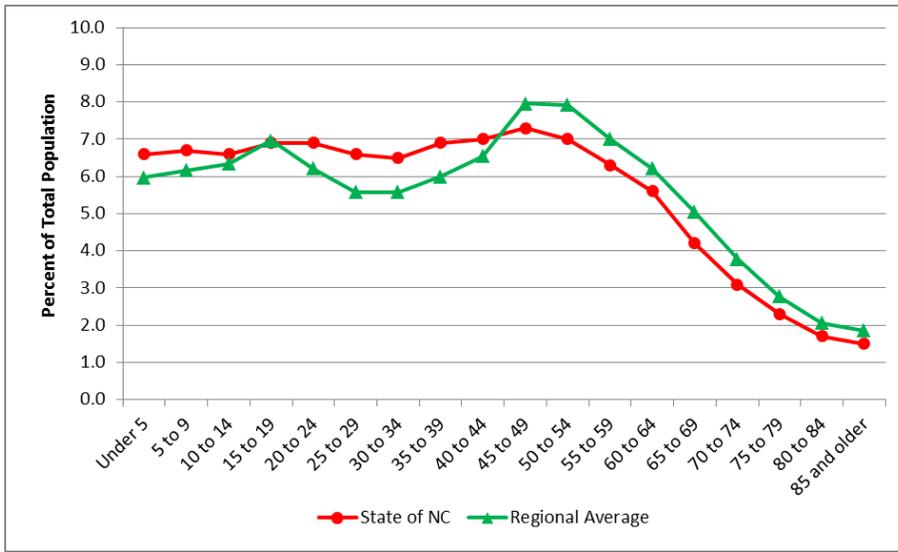
Figures 3 and 4 compare the age distribution of the NC population to the age distribution of the populations in Perquimans County and the ARHS Region, respectively. In Perquimans County as well as the region there was a smaller proportion of young persons and a larger proportion of older persons than demonstrated in the state age distribution profile.

Figure 3. Population Distribution by Age, Perquimans 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. 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 presented in Table 8.

- Parkville Township was the township with the highest proportion of persons under the age of 18 (23.7%).
- Hertford Township had the highest proportion of persons ages 18-24 (8.0%) and ages 25-34 (12.5%).
- Belvidere Township had the highest proportion of persons ages 35-44 (13.3%).
- New Hope Township had the highest proportion of persons ages 45-54 (17.0%).
- Bethel Township had the highest proportion of persons ages 55-64 (18.4%) and age 65 and older (30.7%).

Table 8. Population by Age, by Township, Perquimans 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
Belvidere Township	20.6	6.3	10.6	13.3	16.7	15.7	16.8
Bethel Township	16.9	5.9	7.4	8.4	12.5	18.4	30.7
Hertford Township	23.3	8.0	12.5	10.6	13.1	13.8	18.8
New Hope Township	20.1	6.9	9.5	12.6	17.0	16.0	17.8
Parkville Township	23.7	7.9	11.3	10.6	16.1	13.2	17.2
Perquimans County Total	20.6	7.0	9.9	10.7	14.7	15.7	21.5

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

Because the proportion of the Perquimans County population age 65 and older is larger than the proportion of that age group statewide, it merits closer examination. 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 Perquimans 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 Perquimans 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 85 and older, which is predicted to grow by 113% over that period, from 2.3% to 4.9% 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 ages 75-84, which is predicted to grow by 75% over that period, from 6.1% to 10.7% of the total county population.
- The segment of the Perquimans County population age 65 and older is projected to total 4,541 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+
Perquimans County	11,368	2,192	19.3	1,205	10.6	751	6.6	236	2.1
<i>Regional Total</i>	116,155	17,502	15.1	9,504	8.2	6,011	5.2	1,987	1.7
<i>Regional Average</i>	16,594	2,500	n/a	1,358	n/a	859	n/a	284	n/a
Pamlico County	12,934	2,429	18.8	1,455	11.2	722	5.6	252	1.9
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

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+
Perquimans County	13,453	2,887	21.5	1,763	13.1	815	6.1	309	2.3
<i>Regional Total</i>	135,913	21,119	15.5	12,006	8.8	6,579	4.8	2,534	1.9
<i>Regional Average</i>	19,416	3,017	n/a	1,715	n/a	940	n/a	362	n/a
Pamlico County	13,144	2,857	21.7	1,655	12.6	929	7.1	273	2.1
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

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

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+
Perquimans County	14,351	3,942	27.5	2,086	14.5	1,391	9.7	465	3.2
<i>Regional Total</i>	141,935	27,796	19.6	16,069	11.3	8,592	6.1	3,135	2.2
<i>Regional Average</i>	20,276	3,971	19.6	2,296	n/a	1,227	n/a	448	n/a
Pamlico County	13,451	3,963	29.5	2,188	16.3	1,273	9.5	502	3.7
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+
Perquimans County	15,213	4,541	29.8	2,154	14.2	1,634	10.7	753	4.9
<i>Regional Total</i>	149,095	34,752	23.3	19,056	12.8	11,566	7.8	4,130	2.8
<i>Regional Average</i>	21,299	4,965	n/a	2,722	n/a	1,652	n/a	590	n/a
Pamlico County	13,572	4,412	32.5	2,064	15.2	1,651	12.2	697	5.1
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 Perquimans County had:

- the lowest proportion with less than a high school diploma or GED (21.7%);
- the second-lowest proportion with a graduate or professional degree (7.0%), ahead of only the regional average (4.5%);
- the highest median household income (\$35,694); and
- the second-lowest monthly social security benefit (\$1,085) ahead of only the regional average (\$1,047).

In addition, Perquimans County had the highest proportion of persons age 65 or older in the labor force (15.5%) and the second highest proportion of elderly homeowners (86.2%) behind only Pamlico County (89.1%).

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)
Perquimans County	21.7	7.0	86.2	15.5	\$35,694	\$1,085
<i>Regional Average</i>	31.7	4.6	84.6	15.2	\$30,795	\$1,047
Pamlico County	26.9	8.4	89.1	12.2	\$35,670	\$1,091
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 285 foreign-born residents residing in Perquimans County in 2010. Using a base 2010 population figure of 13,453, foreign-born residents made up 2% of the total county population at that time.
- Since 1980, the largest influx of the foreign-born population in Perquimans County—103 persons—arrived between 1990 and 2000, an increase of 62% over that 10-year span. Over the same period, the foreign-born population region-wide increased by 31%.
- Between 2000 and 2010 the foreign-born population in the region grew by approximately 71%; comparable growth in Perquimans County was only approximately 6%.

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	
Perquimans County	109	56	103	17	6.3
<i>Regional Total</i>	1,345	581	595	1,784	70.8
Pamlico County	167	8	180	155	43.7
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 4,662 Perquimans County households included in the statistic, an estimated 219 (4.7%) spoke a language other than English. Of these, an estimated nine (4.1%) were linguistically isolated.
- The only linguistically isolated households in Perquimans County in the period cited occurred within population speaking non-Spanish Indo-European languages. 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
Perquimans County	4,662	4,443	0	118	9	77	0	3	0	12
<i>Regional Total</i>	44,330	42,036	135	1,264	27	549	66	204	0	58
<i>Regional Average</i>	6,333	6,005	19	181	4	78	9	29	0	8
Pamlico County	5,154	4,824	22	179	0	87	0	33	0	9
State of NC	3,133,282	2,841,028	43,698	125,899	6,804	69,246	8,730	25,143	1,607	11,127

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>.

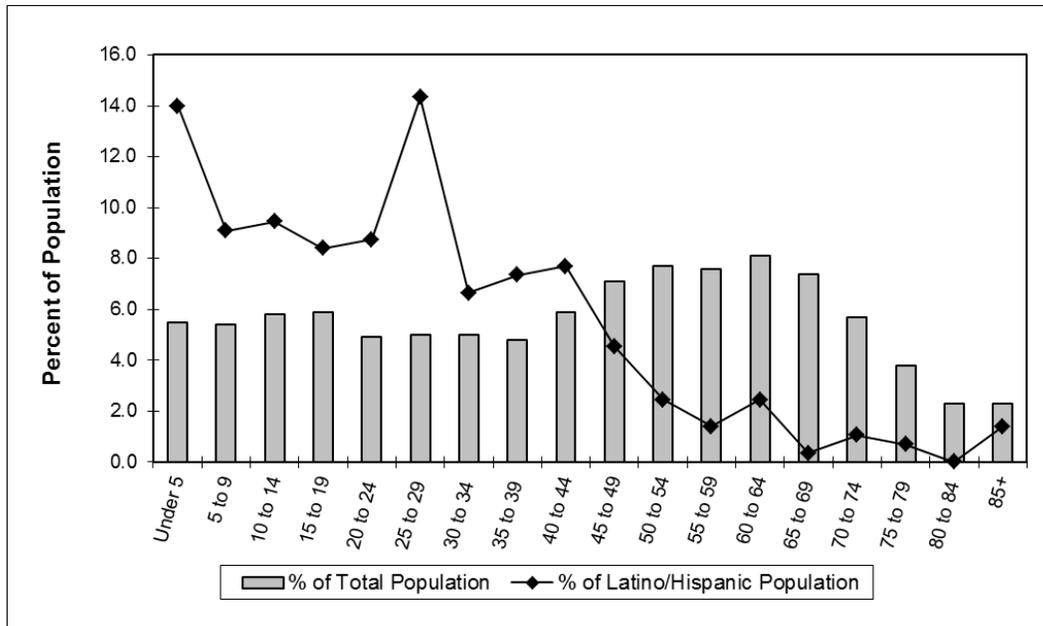
Age Distribution of the Latino Population

In Perquimans County, as in other counties in NC, a major impetus for immigration especially from Spanish-speaking countries—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 Perquimans County population compared to the same profile for the Hispanic/Latino population.

- In Perquimans County all age groups under the age of 45 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 Perquimans County occurred in the under 5, 5-9 and 25-29 age groups. In the overall county population, the highest proportions were in age groups covering the span from 50 to 69.

Figure 5. Age Distribution of Overall and Latino Populations in Perquimans 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 Perquimans County had the largest proportion of military veterans among the jurisdictions under comparison. Veterans composed 16.4% of Perquimans County's overall adult civilian population in the period cited.

Although it was home to the largest contingent of military veterans among the comparators, Perquimans County was *not* home to the oldest veteran population. In Perquimans County, 44.0% of veterans were age 65 or older, compared to 53.3% in Pamlico County. Region-wide 38.0% of veterans were 65 or older, compared to 35.7% statewide and 40.0% nationally.

**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
Perquimans County	10,394	8,689	83.6	1,705	16.4	4.1	25.5	26.4	24.6	19.4
<i>Regional Total</i>	101,634	88,534	87.1	13,100	12.9	n/a	n/a	n/a	n/a	n/a
<i>Regional Average</i>	14,519	12,648	87.1	1,871	12.9	5.9	26.3	25.4	19.7	18.3
Pamlico County	10,693	9,131	85.4	1,562	14.6	3.0	18.8	24.9	28.2	25.1
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 49 blind or visually-impaired persons living in Perquimans 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)
Perquimans County	49
<i>Regional Total</i>	463
<i>Regional Average</i>	66
Pamlico County	36
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 catastrophic event. Persons volunteer to be included on the registry and have the choice to accept or decline assistance when it is offered.

Perquimans County Emergency Management has advertised and disseminated a “Perquimans County Voluntary Special Needs Registration Form” via various sources. All completed and returned forms are sent back to the Emergency Management Coordinator who then turns them

over to the Perquimans County Health Department. The Health Department evaluates the information identified on the form and places each candidate into a Risk Level of Impairment of I to III. The Risk Levels of Impairment are as follows:

- Level I – (Low) Need Basic Transportation. Examples include: severe arthritis, hearing impairment, oxygen dependence, and mobility impairment.
- Level II – (Medium) Need Caregiver. Examples include: visual Impairment, hearing Impairment, walker/wheelchair dependent, slight to moderate dementia, severe respiratory problems, and requiring administration of medications.
- Level III – (High) Need Specialized Care. Examples include: legally blind, on feeding tube, bedridden, electric dependent, hearing/speech impairment, on dialysis, and on life support.

After the Health Department has assigned a Risk Level of Impairment to each form they are returned to the Perquimans County Emergency Management Coordinator. These forms are filed in the Perquimans County Emergency Management office and kept confidential as per GS# 45 C.F.R. 164.510 (b)(4). From the information of each form Perquimans County Emergency Management takes the name, address, phone number, caregiver information, and the Risk Level of Impairment and gives this information to the specific Fire Department in whose fire district the impaired person resides. A complete countywide listing of this information is given to Perquimans County EMS, Perquimans County Communications, and the Perquimans County Sheriff's Office. If and when a situation occurs involving a Perquimans County Special Needs Registrant, First Responders are aware of what they are dealing with. The Perquimans County Special Needs Register is updated as new information comes to the attention of Perquimans County Emergency Management (11).

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 Perquimans County in 2012 was 100.3%, a phenomenon that occurs because of the source of the figures (see the footnote to the table, below).
- Approximately 74% of the registered voters in Perquimans County were white and 24% were Black/African American, close to the proportions those racial groups represented in the overall county population (72% and 25%, respectively) 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.	%
Perquimans County	10,478	10,054	100.3	7,432	73.9	2,412	24.0	17	0.2	34	0.3	193	1.9
<i>Regional Average</i>	15,719	14,031	100.4	9,055	66.5	4,458	30.1	25	0.2	61	0.4	493	3.2
Pamlico County	11,245	9,330	100.4	7,209	77.3	1,850	19.8	30	0.3	41	0.4	241	2.6
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
Perquimans County	62.00	32.00	70.39	44.12	67.41
<i>Regional Average</i>	58.57	35.29	68.67	44.37	65.81
Pamlico County	62.00	44.00	71.66	51.59	71.20
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 Perquimans 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 Perquimans County
(January, 2013)**

Religious Bodies	Number of Congregations	Number of Adherents
African Methodist Episcopal Zion Church	7	831
Assemblies of God	2	131
Bahai	0	2
Christian Church (Disciples of Christ)	1	0
Christian Churches and Churches of Christ	2	176
Episcopal Church	1	125
Friends United Meeting	2	207
International Pentecostal Church of Christ	1	34
International Pentecostal Holiness Church	2	95
Jehovah's Witness	1	n/a
National Baptist Convention USA, Inc.	1	0
Non-denominational	3	612
Southern Baptist Convention	8	1,747
United Methodist Church	8	1,579
Wesleyan Church, The	1	179
TOTAL	40	5,718

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

There are three municipalities in Perquimans County that have their own police departments: Bethel, Hertford and Winfall. The rest of the county is covered by the Perquimans County Sheriff's Office, headquartered in Hertford.

Fire and Rescue Departments

The six fire departments that serve Perquimans County are listed in Table 18.

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

Department Name	Location
Belvidere-Chappell Hill Fire Department	Belvidere
Bethel Volunteer Fire Department	Hertford
Durants Neck Volunteer Fire Department	Hertford
Hertford Fire Department	Hertford
Inter-County Volunteer Fire Department	Hertford
Winfall Volunteer Fire Department	Winfall

Source: Departments, Fire Departments; Perquimans County NC, website;
<http://www.co.perquimans.nc.us/departments/fire-departments.html>.

Public Libraries

There is one public library that serves the people of Perquimans County (12):

- Perquimans County Library (Hertford)

Perquimans County Senior Center

The Perquimans County Senior Center, located in Hertford, serves residents of Perquimans County who are age 55 or older, or a spouse age 55 or older. There is no membership fee.

Activities

The Senior Center offers many classes and workshops. Some meet weekly or monthly and others at specially-scheduled times. Programs include: arts and crafts, flower arranging, basket weaving, cooking classes, mixed media painting, computer classes, card playing, bingo, line dance, bowling, billiards, and luncheons. Other opportunities include day trips, health fairs, and Senior Games.

Services

Services available at the Center include: telephone reassurance, health promotion, Operation Heat Relief, Seniors' Health Insurance Information Program (SHIIP), and referral to service agencies

Elderly Nutrition Program

Congregate Meals. The Elderly Nutrition Program is designed for persons 60 years of age and older and their spouses, regardless of age. A hot meal providing 1/3 of the Recommended Daily Dietary Allowance is served five days a week. The purpose of the Congregate Program is to promote the health and well-being of older people by providing a meal and opportunities for health education, social interaction and recreation. Meals are served at 12 congregate settings in a 10-county region of eastern NC.

Home-Delivered Meals. The Home Delivered Meals Program is designed to improve the health of impaired older persons by providing a nutritionally balanced meal served in their homes by volunteers (13).

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 Perquimans 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.]

Perquimans County Community Resource Directories and Guides

Discover Perquimans County

Links to events, dining, attractions, organizations, lodging, golfing, churches, and volunteer opportunities throughout Perquimans County.

Portal - <http://www.visitperquimans.com/>.

Perquimans County Government Directory of Services

Alphabetical list of live links to services provided by the county.

Portal: <http://www.co.perquimans.nc.us/>.

Albemarle Smart Start Partnership Community Resource Guide

Searchable on-line directory of programs and services available in 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.

Portal: <http://www.ncarts.org/county.cfm?county=Perquimans>.

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, Perquimans County and Pamlico County both were assigned a Tier 2 designation (14).

County Revenue Indicators

State and local governments track 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 one of these indicators—Gross Collections of State Sales and Use Tax—for FY2005-06 through FY2011-12. This parameter can be considered an indicator of consumer confidence, since it is directly related to the consumption of goods.

- There are large differences in tax collections between Currituck and Pasquotank counties and the other five counties the region, whose collections are all below the arithmetic average for the region.
- It is interesting to note that gross collections did *not* fall with the start of the national recession in FY2008-09 but rather continued to rise throughout the region through FY2010-11. A decline occurred, however, in every county between FY2010-11 and FY2011-12.
- Gross collections in Perquimans County were lowest over the period cited in FY2008-09, but since have rebounded.

Table 19. Gross Collections on State Sales and Use Taxes, Albemarle Region (FY2005-06 through FY2011-12)

Location	FY2005-06	FY2006-07	FY2007-08	FY2008-09	FY2009-10	FY2010-11	FY2011-12
Bertie County	2,228,604	1,620,475	1,572,678	1,628,483	3,130,749	3,540,433	3,119,783
Camden County	1,642,522	1,589,862	1,626,294	1,432,573	2,439,702	3,003,630	2,456,555
Chowan County	3,403,699	3,704,208	3,368,527	3,120,013	4,808,715	5,400,857	4,744,508
Currituck County	10,299,573	10,042,159	9,910,026	9,908,895	15,813,782	19,180,930	18,508,365
Gates County	662,141	619,181	648,341	686,390	1,197,645	1,320,173	1,187,862
Pasquotank County	16,838,820	17,568,842	16,381,292	16,178,950	19,290,971	21,161,267	19,123,519
Perquimans County	1,573,459	1,915,625	1,959,246	1,600,048	2,187,504	2,383,814	2,063,349
<i>Regional Average</i>	5,235,545	5,294,336	5,066,629	4,936,479	6,981,295	7,998,729	7,314,849

Source: NC Department of Revenue, Tax Publications and Reports, State Sales and Use Tax Reports by Fiscal Year, by County Summary; <http://www.dornrc.com/publications/fiscalyearsales.html>.

Table 20 presents locally-provided data on other revenue indicators.

- All the revenue indicators cited except collections on land transfers fell steadily from FY2009-10 through FY2011-12, indicating that recovery from some of the effects of the national recession that began in 2008 were still being felt as late as the spring of 2012.

**Table 20. Revenue Indicators, Perquimans County
(FY2009-10 through FY2011-12)**

Revenue Indicator	FY2009-10	FY2010-11	FY2011-12
Number of building permits	247	191	168
Value of building permits	\$ 83,672	\$ 54,920	\$ 47,296
Collections on land transfers	\$ 383,986	\$ 257,840	\$ 341,779
Occupancy receipts	\$ 10,060	\$ 9,752	\$ 8,089

Source: Sharon Ward, Perquimans County Government Finance Officer. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, November 30, 2012.

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 21 summarizes recent income data for Perquimans County and its comparators. Among these jurisdictions:

- Per capita personal income was highest statewide and lowest in Perquimans County, where the figure was over \$6,000 lower than the state figure.
- Median household income was highest statewide and lowest in Perquimans County, where the figure was almost \$12,700 lower than the state figure.
- Median family income was highest as the seven-county regional average and lowest in Perquimans County, where it also was over \$4,000 below the state average.

Table 21. Income Measures

Location	Per Capita Personal Income	Per Capita Income Difference from State	2011 Est Median Household Income	Median Household Income Difference from State	2010 Est Median Family Income	Median Family Income Difference from State
Perquimans County	\$17,811	-\$6,144	\$31,224	-\$12,692	\$48,870	-\$4,050
<i>Regional Average</i>	\$19,135	-\$4,820	\$36,236	-\$7,680	\$55,017	\$2,097
Pamlico County	\$22,685	-\$1,270	\$36,519	-\$7,397	\$51,630	-\$1,290
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 22 details the various categories of industry by sector in Perquimans 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 Perquimans County that employed the largest percentage of the workforce (18.79%) was Educational Services.
- Public Administration accounted for the second largest percentage of the Perquimans County workforce, at 17.74%, followed in third place by Accommodation and Food Services, at 13.11% and Retail Trade at 10.01%. No other single sector accounted for as much as 9% of the total workforce in Perquimans County.
- In Pamlico County, the sector employing the largest percentage of the workforce (17.23%) was Educational Services, followed by Public Administration (16.93%), and Retail Trade (15.67%).
- Region-wide, the sector employing the largest percentage of the workforce (17.30%) was Health Care and Social Assistance, followed by Educational Services (14.16%) and Retail Trade (13.22%).
- Statewide, the sector employing the largest percentage of the workforce was Health Care & Social Assistance (14.33%), followed by Manufacturing (11.64%) and Retail Trade (11.46%).

- The average annual wage per employee in Perquimans County in 2011 was \$27,861, \$1,403 less than the average annual wage per employee in Pamlico County, \$2,350 less than the average region-wide, and \$18,911 less than the average statewide.

**Table 22. Insured Employment and Wages by Sector
(Annual Summary, 2011)**

Sector	Perquimans County			Pamlico 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	51	2.99	\$31,316	77	2.94	\$30,947	956	2.94	\$32,961	29,340	0.8	\$28,752
Mining	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	94	5.50	\$27,643	171	6.52	\$33,715	1,119	3.45	\$29,678	194,022	5.0	\$41,316
Manufacturing	32	1.87	\$36,262	170	6.48	\$26,154	1,326	4.08	\$39,387	448,566	11.6	\$52,613
Wholesale Trade	92	5.39	\$38,534	33	1.26	\$36,201	1,187	3.66	\$37,610	167,533	4.3	\$61,194
Retail Trade	171	10.01	\$18,024	411	15.67	\$20,355	4,292	13.22	\$20,787	441,664	11.5	\$24,650
Transportation & Warehousing	83	4.86	\$30,295	65	2.48	\$31,534	1,129	3.48	\$40,975	125,395	3.3	\$43,400
Information	*	n/a	*	34	1.30	\$20,839	217	0.67	\$32,064	72,495	1.9	\$63,833
Finance & Insurance	46	2.69	\$32,454	48	1.83	\$31,961	1,006	3.10	\$39,722	149,135	3.9	\$75,088
Real Estate & Rental & Leasing	*	n/a	*	17	0.65	\$23,948	635	1.96	\$22,342	49,753	1.3	\$38,476
Professional, Scientific & Technical Services	32	1.87	\$42,094	87	3.32	\$39,625	1,062	3.27	\$43,178	180,237	4.7	\$66,951
Management of Companies & Enterprises	*	n/a	*	n/a	n/a	n/a	53	0.16	\$23,125	73,019	1.9	\$88,763
Administrative & Waste Services	55	3.22	\$16,735	30	1.14	\$41,846	1,180	3.63	\$29,725	212,177	5.5	\$30,258
Educational Services	321	18.79	\$33,344	452	17.23	\$34,552	4,597	14.16	\$34,771	382,110	9.9	\$39,787
Health Care & Social Assistance	141	8.26	\$26,898	405	15.44	\$22,545	5,619	17.30	\$29,459	552,337	14.3	\$42,811
Arts, Entertainment & Recreation	*	n/a	*	*	n/a	*	341	1.05	\$18,092	68,749	1.8	\$28,474
Accommodation & Food Services	224	13.11	\$10,580	179	6.82	\$12,676	2,866	8.82	\$12,263	346,059	9.0	\$14,877
Other Services	63	3.69	\$15,579	*	n/a	*	1,136	3.50	\$23,337	241,703	6.3	\$43,641
Public Administration	303	17.74	\$30,300	444	16.93	\$32,064	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	1,708	100.00	\$27,861	2,623	100.00	\$29,264	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 23 lists the largest 25 employers in Perquimans County as of the end of the 3rd Quarter, 2011.

- Only one employer listed—Perquimans County Schools—employed more than 250 people.
- The second largest employer was Perquimans County government.

**Table 23. Largest 25 Employers in Perquimans County
(Third Quarter, 2011)**

Rank	Employer	Industry	No. Employed
1	Perquimans County Schools	Education & Health Services	250-499
2	Perquimans County	Public Administration	100-249
3	Albemarle Plantation	Leisure & Hospitality	50-99
4	Ssc Hertford Operating Company Llc	Education & Health Services	50-99
5	Food Lion Llc	Trade, Transportation & Utilities	50-99
6	NC Department Of Transportation	Public Administration	Below 50
7	Captain Bobs	Leisure & Hospitality	Below 50
8	Tandem Inc Dbmcdonalds	Leisure & Hospitality	Below 50
9	Hardee's- Non Edi	Leisure & Hospitality	Below 50
10	Albemarle Electric Membership Corp	Trade, Transportation & Utilities	Below 50
11	Albemarle Commission	Public Administration	Below 50
12	Healthcare Services Group Inc	Professional & Business Services	Below 50
13	Rps Inc	Trade, Transportation & Utilities	Below 50
14	Town Of Hertford	Public Administration	Below 50
15	State Of NC Dept Of Juvenile Justice	Public Administration	Below 50
16	US Postal Service	Trade, Transportation & Utilities	Below 50
17	Parkway Ag Supply Llc	Trade, Transportation & Utilities	Below 50
18	Tommy's Pizza	Leisure & Hospitality	Below 50
19	Reed Oil Co	Trade, Transportation & Utilities	Below 50
20	Coastal Carolina Family Practice,Pa	Education & Health Services	Below 50
21	Southhaven Manor Inc	Education & Health Services	Below 50
22	Nicholson House Inc	Leisure & Hospitality	Below 50
23	Woodards Pharmacy Inc	Trade, Transportation & Utilities	Below 50
24	Alexander Electrical Contractor Inc	Construction	Below 50
25	James Or Janice Rhodes	Natural Resources & Mining	Below 50

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 24 summarizes 2007-2011 estimated travel for employment data for Perquimans County and its comparator jurisdictions.

- A moderate fraction—30%—of Perquimans County resident workers were employed within the county.
- Of the 3,314 Perquimans County resident workers who left the county for work, 683 (15%) worked out-of-state and 2,631 (56%) worked elsewhere in NC.
- In Pamlico County, 49% of resident workers worked in-county; 49% of the remaining workers worked elsewhere in NC, and only 2% 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 24. 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
Perquimans County	4,718	4,035	85.5	1,404	29.8	2,631	55.8	683	14.5	3,314	70.2
Regional Average	8,155	6,265	75.6	4,236	44.8	2,029	30.8	1,890	24.4	3,919	55.2
Pamlico County	5,085	4,971	97.8	2,495	49.1	2,476	48.7	114	2.2	2,590	50.9
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	1,170,401	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 25 compares data on modes of transportation to work from the 2000 US Census and a 2011 Census Bureau estimate.

- Few Perquimans County workers used public transportation to get to work in either 2000 or 2007-2011, but the number did increase from one period to the next. Use of public transportation for getting to work was not common in any of the jurisdictions being compared.
- The number of Perquimans County workers who carpoled decreased between 2000 and 2007-2011. Carpooling also decreased in Pamlico County and statewide over the same period, but increased slightly region-wide.
- The number of workers who walked to work increased in Perquimans County and in NC.
- The number of Perquimans County workers who worked at home decreased 40% between 2000 and 2007-2011, and the comparable figure decreased 35% in Pamlico County, but working-at-home increased significantly in NC and region-wide.

**Table 25. 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
Perquimans County	3,378	3,589	691	572	30	83	100	131	194	116
<i>Regional Average</i>	5,233	6,065	1,185	1,249	49	36	166	135	164	220
Pamlico County	3,670	3,969	814	802	37	15	154	95	171	111
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 Perquimans County

Public transportation in Perquimans 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 from 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 (15).

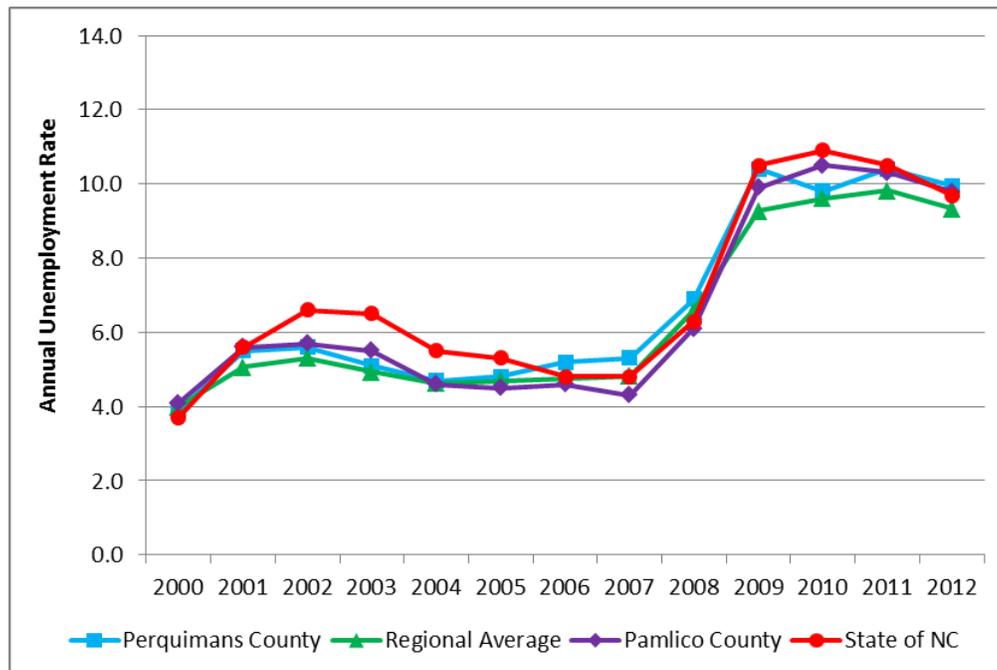
According to data provided by ICPTA, in 2012 system demand-response and subscription service ridership totaled 104,095 passenger trips and covered 914,629 vehicle miles. Approximately 39,000 trips (37%) were provided under Medicaid or other contracts, including 7,149 DSS Medicaid or WorkFirst trips, 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 (16).

Unemployment

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

- Beginning with 2008 data, the unemployment rate began to rise sharply in all four jurisdictions. Unemployment decreased in Perquimans County in 2010, rose again in 2011, and decreased in the first nine months of 2012. In Pamlico County and NC unemployment began to decrease in 2011, but region-wide the unemployment rate did not begin to decrease until 2012.

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

The NC Employment Security Commission monitors business closings and layoffs across the state, by county. The data collection system is partially anecdotal and therefore imprecise, since it relies on data submitted to the commission and on monitored newspaper reports. Sometimes the data notes a layoff or closing, but not re-hirings or re-openings. Table 26 lists the business closings and layoffs catalogued for Perquimans County for the period from 2008 to 2012.

- According to these data, from 2008 through 2012 there were no announced business closings in Perquimans County, but there was one announced layoff in 2009, involving 11 persons. The reason for the layoff appeared to relate to economic conditions.

**Table 26. Business Closings and Layoffs in Perquimans County
(2008-2012)**

Effective Date	Company	City	Product	No. Affected	Reason	Closing/Layoff
2009	Perquimans County Schools	Hertford	School administration	11	Budget cuts	LY

Source: NC Employment Security Commission, Labor Market Information Division, Demand Driven Data Delivery System, Announced Business Closings and Permanent Layoffs; <http://esesc23.esc.state.nc.us/d4/AnnounceSelection.aspx>.

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 27 shows the decadal annual poverty rate 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 Perquimans County and the seven-county ARHS region, the poverty rate fell each decade from 1970 through 2000. By 2007-2011 the rates in both jurisdictions were up again, by 15% in Perquimans County and by 7% region-wide.
- In Pamlico County, the poverty rate fell by 66% between 1970 and 2006-2010 before rising again in 2007-2011.
- Statewide, the poverty rate fell every decade through 2000 before rising in both 2006-2010 and 2007-2011.
- Perquimans County had the highest poverty rate among the four jurisdictions for every time period shown in the table.

**Table 27. 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
Perquimans County	40.6	24.4	21.6	17.9	18.0	20.6
<i>Regional Average</i>	31.8	21.5	18.1	16.5	16.4	17.5
Pamlico County	31.2	20.6	18.9	15.3	10.7	12.2
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 28 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 from 2.1 to 5.8 times the poverty rate among whites.
- The largest average racial disparity in poverty was in Perquimans County, where the poverty rate for blacks was, over the period cited, an average of 4.2 times the rate for whites.

**Table 28. Persons in Poverty by Race
(2000; 2006-2010 and 2007-2011 Five-Year Estimates)**

Location	2000				2006-2010				2007-2011			
	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty	Total No. in Poverty	Total % in Poverty	% White in Poverty	% Black in Poverty
Perquimans County	1,997	17.9	10.8	35.7	2,348	18.0	7.8	45.5	2,705	20.6	12.5	42.7
<i>Regional Average</i>	2,769	16.5	8.9	29.7	3,094	16.4	9.9	29.2	3,330	17.5	10.7	30.6
Pamlico County	1,885	15.3	11.0	29.4	1,319	10.7	7.4	25.6	1,518	12.2	10.3	21.5
State of NC	958,667	12.3	8.5	22.9	1,399,945	15.5	11.2	25.6	1,473,556	16.1	11.8	26.1
	a	a	a	a	b	b	b	b	c	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 29 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 28% to 74%, with the greatest average variance—64%—occurring in Pamlico County. The remaining average variances were 61% in Perquimans County, 47% region-wide, and 35% in NC.

**Table 29. 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
Perquimans County	17.9	27.2	15.8	18.0	30.6	9.9	20.6	33.1	10.2
<i>Regional Average</i>	16.5	22.2	19.2	16.4	24.3	12.7	17.5	27.7	12.6
Pamlico County	15.3	24.2	13.4	10.7	17.1	9.9	12.2	21.2	9.2
State of NC	12.3	15.7	13.2	15.5	21.3	10.7	16.1	22.6	10.3
	a	a	a	b	b	b	c	c	c

Source: 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.

Table 30 shows the percent of students *enrolled* to receive free or reduced-price lunch. To help readers grasp the numbers behind the percentages in all jurisdictions, Table 31 shows the number of students *eligible* for free or reduced price lunch in several recent school years (SYs).

- The percentage of students in Perquimans County enrolled for free or reduced-price school lunch averaged 65.7% over the period cited, with the highest percentage in SY2007-08. The Perquimans County figure was consistently the highest among the four jurisdictions cited in all eight years cited.

Table 30. 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
Perquimans County	62.4	61.6	61.1	69.3	70.8	65.7	67.2	67.7
<i>Regional Average</i>	54.8	54.2	54.7	53.0	52.0	52.4	55.9	54.8
Pamlico County	54.9	56.0	52.2	52.6	58.8	53.1	62.0	64.1
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>

While the table above presented the *percentage* of students *enrolled* in free and reduced-price lunch programs, Table 31 presents data on the *number* of students *eligible* for free and reduced-price lunch.

- Since SY2007-08, the number of students eligible for the free- or reduced price school lunch program increased annually region-wide and statewide.
- In Perquimans County, the number of eligible students appeared to vary without pattern.
- In SY2010-11, the number of eligible students statewide was an eight-year high and 63% higher than the number eligible in SY2007-08.

**Table 31. Students Eligible for Free or Reduced-price School Lunch
(SY2003-04 through SY2010-11)**

Location	No. Students ELIGIBLE for Free or Reduced-Price Lunch							
	SY2003-04	SY2004-05	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11
Perquimans County	1,074	1,076	1,016	957	1,004	–	1,072	1,058
<i>Regional Average</i>	1,580	1,614	1,394	1,503	1,326	1,408	1,565	1,566
Pamlico County	1,089	885	805	878	1,010	783	1,027	1,072
State of NC	605,253	624,500	603,316	624,349	456,210	493,946	720,798	744,757

Source: US Department of Education, Institute of Education Sciences (IES), National Center for Educational Statistics, Common Core of Data, Build a Table Function, County Data (or State Data), Students in Special Programs, Total Free and Reduced Lunch Students; <http://nces.ed.gov/ccd/bat/>.

Perquimans County schools provided more recent data on the utilization of the free- and reduced-price lunch benefit. Table 32 summarizes total school enrollment and the number and percent of students in each of three lunch categories as of October of 2010, 2011 and 2012 (SY2010-11, SY2011-12 and SY2012-13).

- The number of students using the free- or reduced price lunch benefit rose and fell as total enrollment rose and fell over the period cited. The percentage of students using the benefits varied little, ranging from 62.90% to 65.24%.

**Table 32. Number and Percent of Perquimans County Students Using Paid or Subsidized School Lunch
(2010-2012)**

	October 2010		October 2011		October 2012	
	Number	Percent	Number	Percent	Number	Percent
Enrollment	1,808	100.00	1,771	100.00	1,844	100.00
Paid	669	37.00	657	37.10	641	34.76
Reduced	148	8.19	155	8.75	148	8.57
Free	991	54.81	959	54.15	1,045	56.67

Source: Brenda Lassiter, Public Information Officer, Perquimans County Schools. Personal communication to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, November 30, 2012.

County Economic Service Utilization

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

The *Food and Nutrition Services* 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 (17).

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 (18).

Table 33 presents state-catalogued data on the food and nutrition services caseloads and individuals over a six-year period for Perquimans County, the region (as an average) and the state of NC. All the data represent totals for September in the years noted (the end of each Federal fiscal year).

- In all jurisdictions cited the caseloads and numbers of individuals served increased from 2007 through 2011 before falling in 2012.
- If a “case” is an individual, the caseload for food and nutrition services that totaled 1,314 in September, 2012 represented 9.8% of the Perquimans County population as of the 2010 US Census.

**Table 33. Food and Nutrition Services, Caseload and Individuals
(September of 2007-2012)**

Location	2007		2008		2009		2010		2011		2012	
	Total Caseload	Total Individuals										
Perquimans County	789	1,853	850	1,916	1,029	2,292	1,150	2,490	1,737	3,747	1,314	1,322
Regional Average	1,037	2,259	1,141	2,490	1,343	2,903	1,566	3,316	2,523	5,329	1,820	1,838
State of NC	402,268	908,025	444,857	1,011,226	559,703	1,249,226	673,366	1,476,207	832,413	1,797,003	706,690	716,345

Source: NC DHHS, Division of Social Services, Program Statistics and Reviews, Food and Nutrition Services, FNS Caseload Statistics; <http://www.ncdhhs.gov/dss/stats/fsp.htm>

Table 34 presents state-catalogued data on the WorkFirst caseloads and individuals over the same six year period for the same three jurisdictions cited above.

- In Perquimans County, caseload and total individuals were highest in 2007.
- Region-wide, caseload and total individuals were highest in 2008.
- Statewide, caseload was highest in 2009, but total individuals was highest in 2010.

**Table 34. WorkFirst Services, Caseload and Individuals
(September of 2007-2012)**

Location	2007		2008		2009		2010		2011		2012	
	Total Caseload	Total Individuals										
Perquimans County	51	84	37	64	45	11	33	53	33	54	31	42
Regional Average	64	122	69	132	64	40	56	100	55	105	49	86
State of NC	25,085	47,624	24,845	48,009	28,192	16,726	24,978	49,194	23,590	46,943	22,090	43,804

Source: NC DHHS, Division of Social Services, Program Statistics and Reviews, Food and Nutrition Services, WorkFirst Caseload Statistics; <http://www.ncdhhs.gov/dss/stats/wf.htm>.

HOUSING

Table 35 presents US Census Bureau data on housing by type.

- There was an average 22% vacant housing in Perquimans County over both time periods cited, higher than the state and regional averages, but lower than the percentage for Pamlico County (25%).
- Of the occupied housing units in Perquimans County, approximately 77% were owner occupied; 23% were renter occupied.
- The highest proportion of mobile homes in both periods (~32%) was in Pamlico County.
- In 2000 the median monthly mortgage cost was highest statewide and lowest in Perquimans County; in 2006-2010 the highest median monthly mortgage cost was the regional average and the lowest mortgage cost was in Perquimans County.
- Median monthly mortgage cost in Perquimans County increased by 46% between 2000 and 2006-2010.
- In 2000 the highest median gross monthly cost for rent was the state average; in 2006-2010 the highest rent was in Perquimans County.
- Median gross monthly rent cost in Perquimans County increased by 82% between 2000 and 2006-2010.

**Table 35. 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.	%
Perquimans County	6,043		1,398	23.1	4,645	76.9	3,649	78.6	\$810	996	21.4	\$419	1,741	28.8
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
Pamlico County	6,781		1,603	23.6	5,178	76.4	4,256	82.2	\$911	922	17.8	\$466	2,117	31.2
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

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.	%
Perquimans County	6,986		1,388	19.9	5,598	80.1	4,238	75.7	\$1,184	1,360	24.3	\$761	1,949	28.3
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
Pamlico County	7,534		2,044	27.1	5,490	72.9	4,337	79.0	\$1,207	1,153	21.0	\$642	2,486	33.4
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:

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 36 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 Perquimans County, and the percentage increased 2% 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 Perquimans County, but in 2006-2010 the highest percentage was in the region as a whole. Between the periods cited the percentage of Perquimans County housing units spending more than 30% of household income on a mortgage decreased 12%.

**Table 36. 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	
		#	%		#	%		#	%		#	%
Perquimans County	1,301	683	52.5	1,219	656	53.8	2,164	883	40.8	2,320	837	36.1
Regional Average	1,876	844	45.0	1,836	840	45.8	3,303	1,299	39.3	3,397	1,360	40.0
Pamlico County	1,093	391	35.8	1,003	337	33.6	2,343	902	38.5	2,507	993	39.6
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 - 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 Perquimans County was classified as “unaffordable”, compared to 29% in Pamlico County, and averages of 35% region-wide and 32% statewide (19). 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 located in Perquimans County, in Hertford, to assist residents in accessing HUD services (20). At the time this report was developed, there was one HUD-subsidized single-family home available in Perquimans County, in Hertford (21). A search on the HUD affordable apartment website identified two low-rent apartment facilities: an ARC facility in Hertford for developmentally disabled persons, and one family apartment facility, Wayne Fork Drive Apartments, in Hertford (22).

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 Perquimans County: Albemarle Village, Amsterdam Apartments, Bradford Apartments, and Wynne Fork Apartments, all in Hertford (23).

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. (24).

HOUSEHOLDS

Table 37 describes the number of persons living in households in the four comparator jurisdictions.

- The average number of persons per household in Pamlico County—2.27—was the lowest among the jurisdictions being compared. The figure for Perquimans County was the second-lowest.
- The percent of one-person households in Pamlico County—27.8%—was the highest among all four jurisdictions. The figure for Perquimans County was second-lowest.
- The percent of one-person households where the resident was age 65 or older in Perquimans County—45.9%—was the highest among the jurisdictions being compared.

**Table 37. 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
Perquimans County	5,598	2.39	1,421	25.4	652	45.9
<i>Regional Average</i>	7,456	2.52	1,886	24.8	805	43.1
Pamlico County	5,490	2.27	1,526	27.8	682	44.7
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 38 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.

- The percentage of minor children not living with both parents was highest in Pamlico County in both periods cited.
- In Perquimans County the percent of children under the age of 18 *not* living with both parents increased by 21% (from 38.1% to 46.2%) between 2000 and 2010. Statewide the increase was 14% (from 35.5% to 40.4%).
- In Perquimans County the percent of *female* family householders with children under the age of 18 decreased 13% (from 23.4% to 20.4%) between 2000 and 2010. Over the same period, the percent of *male* family householders with children under the age of 18 increased 6% (from 6.5% to 6.9%). Statewide between 2000 and 2010 there was a decrease of 4% in the percent of female family householders with minor children (from 22.8% to 22.0%), and a 5% increase in the percent of male family householders with minor children (from, 6.1% to 6.4%).

**Table 38. 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	%
Perquimans County	3,378	1,312	307	23.4	85	6.5	2,610	1,615	61.9	995	38.1
<i>Regional Average</i>	4,580	2,016	527	24.0	123	6.2	4,147	2,441	61.1	1,706	38.9
Pamlico County	3,718	1,307	277	21.2	83	6.4	2,726	1,656	60.7	1,070	39.3
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	%
Perquimans County	3,949	1,645	336	20.4	113	6.9	2,769	1,489	53.8	1,280	46.2
<i>Regional Average</i>	5,258	2,589	570	20.8	160	6.1	4,396	2,418	55.7	1,978	44.3
Pamlico County	3,724	1,427	286	20.0	113	7.9	2,354	1,257	53.4	1,097	46.6
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 39 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 Perquimans County for the period cited, an estimated 56.5% 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 Pamlico County; the regional average was the lowest comparable figure.

**Table 39. 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. #	%
Perquimans County	294	166	56.5
<i>Regional Average</i>	450	225	47.5
Pamlico County	502	362	72.1
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 (25).

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 40:

- Of the six licensed child care centers in Perquimans County at the time of the report, one (17%) was a five-star facility and two (33%) were four-star facilities.
- Of the four licensed family child care homes in Perquimans County, there were no five-star facilities; two (50%) were four-star facilities and one (25%) was a three-star facility.

**Table 40. NC-Licensed Child Care Facilities in Perquimans County
(November, 2012)**

Type of Facility	Number
Child Care Centers (6)	
Five-star	1
Four-star	2
Three-star	1
Two-star	1
One-star	0
GS 110-106 (Church-affiliated)	1
Temporary	0
Family Child Care Homes (4)	
Five-star	0
Four-star	2
Three-star	1
Two-star	0
One-star	1

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 41 presents total enrollment summaries for child care facilities.

**Table 41. 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
Perquimans County	182	136	184	193	20	23	25	20
<i>Regional Average</i>	347	355	351	428	45	45	45	41
Pamlico County	158	186	174	141	37	33	43	45
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 42 presents the number of children in each jurisdiction that received WorkFirst Working Connections Child Care Subsidies.

- The number of children in Perquimans County that received a WorkFirst child care subsidy increased between 2007 and 2008, before decreasing in each of the next two years.
- In each jurisdiction, the figures were their lowest of the entire period in 2010.

Table 42. Number of Children Receiving WorkFirst Child Care Subsidy (2007-2010)

Location	2007	2008	2009	2010
Perquimans County	66	71	64	50
<i>Regional Average</i>	110	118	91	77
Pamlico County	70	68	46	33
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 are no four-year colleges or universities physically located in Perquimans County, but there are several institutions of higher education in the ARHS region accessible to Perquimans County residents.

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 (26).

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 R-CCC 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 R-CCC Campus (27).

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 (28).

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* (29).

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 (30).

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 (31).

Primary and Secondary Education

Schools and Enrollment

Tables 43 through 51 focus on data pertaining to primary and secondary (mostly public) schools in Perquimans County (as well as its comparator jurisdictions where appropriate).

- There are four public schools in the Perquimans County school district: two elementary schools, one middle school, and one secondary school. There also is one private school in the county (Table 43).

Table 43. 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
Perquimans County Schools	2	1	1	0	1	0	0	0
<i>Regional Total</i>	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.

- Perquimans County High School in Hertford was the largest school in the district, with a SY2011-12 enrollment of 483. Perquimans Central Elementary School in Winfall was the second largest school in the district, with a SY2011-12 enrollment of 417. (Table 44).

Table 44. Perquimans County Public Schools (November, 2012)

School	Location	School Type/Calendar	Grade Range	Enrollment SY2011-12
Hertford Grammar	Hertford	Regular School, Traditional Calendar	3-5	397
Perquimans Central	Winfall	Regular School, Traditional Calendar	PK-2	417
Perquimans County High	Hertford	Regular School, Traditional Calendar	9-12	483
Perquimans County Middle	Winfall	Regular School, Traditional Calendar	6-8	411

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 Perquimans County declined every year between SY2005-06 and SY2008-09 before rebounding in SY2009-10; a similar pattern occurred across the ARHS region, with continuous enrollment declines from SY2007-08 through SY2010-11 (Table 45).

**Table 45. K-12 Public School Enrollment
(SY2004-05 through SY2011-12)**

Location	Number of Students							
	SY2004-05	SY2005-06	SY2006-07	SY2007-08	SY2008-09	SY2009-10	SY2010-11	SY2011-12
Perquimans County Schools	1,775	1,851	1,848	1,831	1,785	1,795	1,799	1,888
<i>Regional Average</i>	3,123	3,210	3,212	3,150	3,101	3,038	3,017	3,122
State of NC	1,395,810	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	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 46 presents data on several measures of educational attainment.

- Among the four jurisdictions being compared, in a 2006-2010 US Census Bureau estimate, Perquimans County had the highest percentage of high school graduates (85.3%) 2% higher than the state average and 6% higher than the regional average.
- In the same period, Perquimans County had the second highest percentage of residents with a bachelor's degree or higher (18.1%), but still 31% lower than the state average.
- According to SY2011-12 End of Grade (EOG) Test results, the percentage of third graders in Perquimans County public schools demonstrating grade-appropriate proficiency in reading (65.4%) was the lowest percentage among the jurisdictions being compared. Results for math among Perquimans County third-graders (86.9%) was better, and the highest among the four jurisdictions. End of Grade test performance among Perquimans County eighth graders showed 71.4% at the appropriate level for reading and 87.2% at the appropriate level for math. The average SAT score for Perquimans County students was 967, with a participation rate of 49%.

Table 46. 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
Perquimans County	85.3	18.1	65.4	86.9	71.4	87.2	49%	967
<i>Regional Average</i>	81.8	15.6	68.4	80.2	70.2	87.6	60%	956
Pamlico County	82.7	17.5	67.9	81.5	64.8	82.4	54%	995
State of NC	83.6	26.1	68.8	82.8	71.1	85.2	68%	997

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 47 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 Perquimans County schools (\$10,040) was 4% higher than the average for the ARHS region (\$9,645), and 19% 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: 69% in Perquimans County schools, an average of 69% region-wide, and an average of 64% statewide.

Table 47. Educational Expenditures (SY2011-12)

Location	Per-Pupil Expenditure			
	Local	State	Federal	Total
Perquimans County Schools	\$1,603	\$6,912	\$1,525	\$10,040
<i>Regional Average</i>	\$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 48 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 Perquimans County schools fluctuated over the period cited in the table, but was highest (7.75) in SY2005-06 and lowest (3.21) in SY2009-10.

- Local data provided by a Perquimans County public schools representative updated the drop-out rate data to include the figure for SY2011-12: 3.88, a 14% increase since SY2010-11 (32).

Table 48. 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
Perquimans County Schools	5.92	7.75	5.23	5.39	3.56	3.21	3.39
<i>Regional Average</i>	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 49.

- The overall graduation rates for all student categories shown in the table except economically disadvantaged students were highest for students of Perquimans County schools.
- Historical data on graduation rate provided by the same Perquimans County school official cited above demonstrates that the four-year cohort graduation rate increased by 31% overall (from 63.9% to 83.7%) from SY2007-08 to SY2011-12.

Table 49. 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
Perquimans County Schools	129	108	83.7	70	55	78.6	59	53	89.8	65	50	76.9
<i>Regional Average</i>	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 acts 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 50 summarizes crime and violence catalogued by the NC Department of Public Instruction for schools in Perquimans County, the ARHS region, Pamlico County, and the state overall.

- The number and rate of acts of school crime and violence in Perquimans County schools and the other jurisdictions fluctuated 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 50. 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										
Perquimans County Schod	11	6.4	11	6.3	11	6.4	14	8.0	12	7.0	14	8.1	3	1.7
<i>Regional Average</i>	12	4.4	14	4.8	17	5.5	21	7.6	19	6.0	14	5.0	16	4.6
Pamlico County Schools	8	5.0	44	28.0	33	21.9	20	14.3	12	8.6	7	5.1	6	4.3
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>.

Local data provided by the same Perquimans County schools representative cited above presented detail on school crime and violence in SY2011-12. In that period, students at Perquimans County High School committed the following reportable offenses (10 total):

- Possession of controlled substance – 4
- Possession of weapon – 4
- Possession of alcoholic beverage - 2

Table 51 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, and expulsions were rare.

**Table 51. School Disciplinary Activity
(SY2007-08 through SY2010-11)**

School System	SY2007-08			SY2008-09			SY2009-10			SY2010-11		
	No. Short-Term Suspensions ¹	No. Long-Term Suspensions ²	No. Expulsions	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
Perquimans County Schools	302	1	0	198	0	0	190	2	0	193	1	0
<i>Regional Average</i>	611	7	0	570	10	0	584	8	1	570	6	0
Pamlico County Schools	609	5	0	451	6	0	396	0	0	286	1	0
State of NC	308,010	5,225	116	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.

a - 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 plus burglary, larceny, arson, and motor vehicle theft.

Table 52 presents the rates for index crime, violent crime, and property crime for the period from 2007 through 2011.

- The overall index crime rate in Perquimans County was the lowest among the jurisdictions being compared throughout the period cited.
- The rates of violent crime and property crime in Perquimans County also were the lowest in all years cited.
- The largest component of index crime in all four jurisdictions was property crime.

Table 52. 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
Perquimans County	1,800.4	80.4	1,720.0	2,037.8	165.0	1,872.8	1,797.0	113.3	1,683.7	1,527.9	113.2	1,414.7	1,846.2	116.4	1,729.9
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
Pamlico County	*	*	*	2,582.8	190.4	2,392.4	2,527.2	274.3	2,252.9	2,320.3	166.9	2,153.4	2,296.5	220.7	2,075.8
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 53 presents detail on index crime committed in Perquimans 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 except 2006 was aggravated assault. In 2006 the predominant violent crime was robbery.
- Larceny was the predominant property crime in 2007 and 2011; burglary was the predominant property crime in 2006, 2008, and 2009. There was the same number of larcenies and burglaries in Perquimans County in 2010.

Table 53. Types of Crimes Reported in Perquimans County (2006-2011)

Type of Crime	Number of Crimes					
	2006	2007	2008	2009	2010	2011
Violent Crime						
<i>Murder</i>	1	1	1	1	0	0
<i>Rape</i>	2	0	3	3	2	2
<i>Robbery</i>	6	2	5	2	3	5
<i>Aggravated Assault</i>	4	7	11	8	9	8
Property Crime						
<i>Burglary</i>	152	79	119	102	83	95
<i>Larceny</i>	115	126	102	98	83	111
<i>Motor Vehicle Theft</i>	29	9	6	7	9	17
Total Index Crimes	309	224	247	221	189	238

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 54 summarizes data on other types of criminal activities.

- As of January 2, 2013 there were 32 registered sex offenders in Perquimans County, compared to 22 in Pamlico County. The regional average was 32.
- According to the NC Governor's Crime Commission, in 2012 there were no gangs in Perquimans County, and none in Pamlico County. The same year, the Crime Commission sited a total of 963 gangs statewide.
- According to the NC State Bureau of Investigation, there were no methamphetamine drug lab busts in Perquimans County during the period from 2005 through 2011. Over the same period, 1,664 meth lab busts were recorded statewide.

Table 54. 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
Perquimans County	32	0	0	0	0	0	0	0	0	0
<i>Regional Average</i>	32	2	<1	<1	<1	<1	<1	<1	<1	<1
Pamlico County	22	0	0	0	1	0	0	0	0	0
State of NC	14,028	963	328	197	157	197	206	235	344	

Source:

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 55 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 Perquimans County increased from 5 to 7 (40%), and the *rate* of *undisciplined* youth increased from 2.87 to 3.78 (32%).
- Over the same period the *number* of complaints of *delinquent* youth in Perquimans County increased from 28 to 43 (54%), and the *rate* of *delinquent* youth increased from 19.66 to 27.94 (42%).
- Four Perquimans County juveniles were sent to secure detention in 2010; five were sent in 2011.
- No Perquimans County juveniles were sent to youth development centers or transferred to Superior Court in either 2010 or 2011.

**Table 55. 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
Perquimans County	5	7	28	43	2.87	3.78	19.66	27.94	4	5	0	0	0	0
Regional Average	10	9	83	66	2.92	2.89	29.06	24.99	9	10	0	0	0	0
Pamlico County	4	3	31	28	2.64	1.86	24.8	21.18	5	3	0	0	0	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.ncdjdp.org/statistics/databook.html>.

Sexual Assault

Table 56 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.

- Note that since the figures are counts and not rates, they are difficult to compare from one jurisdiction to another in a meaningful way.
- There were many missing figures for Perquimans and Pamlico counties, but even the jurisdictions with a full series of numbers did not demonstrate a clear pattern of complaints.
- 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. At the regional level the number of complaints increased by a factor of 3.4 between FY2007-08 and FY2008-09.

**Table 56. 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
Perquimans County	n/a	n/a	n/a	n/a	n/a	24	24
<i>Regional Average</i>	77	38	39	17	58	66	51
Pamlico County	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State of NC	8,564	8,721	7,444	6,527	8,494	13,392	13,881

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

- The largest proportion of sexual assault complaints in Perquimans County (50.0%) was by adult survivors of child sexual assault; the next largest proportion (33.3%) 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 57. 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.	%
Perquimans County	24	8	33.3	0	0.0	12	50.0	1	4.2	1	4.2	2	8.3	0	0.0
<i>Regional Average</i>	51	6	11.7	3	6.4	20	39.7	5	10.3	12	22.6	3	6.1	2	3.1
Pamlico County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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 58 details the types of offenders involved in sexual assaults in FY2010-11.

- In Perquimans County the most common offender in sexual assault complaints was a relative (58.3%), followed by an acquaintance (37.5%).
- 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 58. 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.	%
Perquimans County	24	14	58.3	9	37.5	0	0.0	1	4.2	0	0.0
<i>Regional Average</i>	49	28	51.4	14	33.1	5	8.7	2	4.9	1	1.9
Pamlico County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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 59 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 in a meaningful way.
- The annual number of complaints varies without a clear pattern in all four jurisdictions over the period covered.

Table 59. 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
Perquimans County	156	80	107	82	102	148	114
<i>Regional Average</i>	177	145	180	134	163	252	216
Pamlico County	87	50	105	301	93	86	50
State of NC	50,726	48,173	47,305	41,787	51,873	66,320	61,283

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

- The 114 domestic violence clients in Perquimans County received a total of 3,160 services.
- The largest numbers of services received by domestic violence complainants in Perquimans County were advocacy (1,703) followed by counseling (451), and information (427).
- The largest numbers of services received by complainants region-wide were for advocacy, information and counseling.
- The local domestic violence shelter in Perquimans County was full on 114 days and the shelter in Pamlico County was never full.

Table 60. 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	
Perquimans County	114	3,160	427	1,703	328	136	451	0	115	0	114
<i>Regional Average</i>	216	3,302	731	1,236	441	72	606	1	214	1	110
Pamlico County	50	1,631	465	328	139	189	176	1	326	7	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 (33).

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 61 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 Perquimans County fluctuated annually without a clear pattern. For the period cited, the highest number of findings was 112 in FY2006-07, and the lowest was 50 in FY2010-11. The average number of reports of child abuse, neglect or dependency per year throughout the period cited was 79.
- 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 high of 27 in FY2004-05 to a low of 0 in FY2009-10, and averaged approximately 6 per year.

Table 61. Reports of Child Abuse and Neglect, Perquimans 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	90	66	112	84	76	86	50	70
No. Substantiated ¹ Findings of Abuse and Neglect	0	0	0	0	0	0	0	3
No. Substantiated Findings of Abuse	4	4	0	2	2	0	1	1
No. Substantiated Findings of Neglect	23	6	1	0	0	0	2	0
Services Recommended	0	6	54	29	24	16	9	16
No. Unsubstantiated Findings	63	33	21	17	4	22	5	2
Services Not Recommended	0	8	24	21	43	30	22	38

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/cqj-bin/broker?_service=default&_program=cwweb.tbReport.sas&county=Alamance&label=County&format=html&entry=10&type=CHILD&fn=FRST&vtype=xfind.

Table 62 presents demographic detail from the same source as above on the cases in Perquimans County described for FY2011-12.

- Of the four substantiated findings of abuse and abuse and neglect, three cases involved African American non-Hispanic children and one involved a white non-Hispanic child.
- For the year cited, two of the cases involved children under the age of six, one a child age 6-12, and one a teenager (age 13-17).
- Three of the children were males, one was a female.

Table 62. Demographic Detail of Child Abuse Cases, Perquimans 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
Abuse and Neglect	3	0	3	0	0	0	3	3	0	1	1	1	0
Abuse	1	1	0	0	0	0	1	0	1	1	0	0	0
Services Needed	2	2	0	0	0	0	2	0	2	0	1	1	0
Services Provided, No Longer Needed	8	6	1	0	1	0	8	6	2	4	3	1	0
Services Recommended	16	10	4	0	2	0	16	5	11	6	4	6	0
Unsubstantiated	2	0	2	0	0	0	2	1	1	1	0	1	0
Services Not Recommended	38	23	10	0	5	0	38	14	24	11	21	6	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 63 presents state-catalogued 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 Perquimans County the proportion of reports screened in for further investigation and services was 33% in 2009 and 39% in 2011.
- Services most frequently provided to Perquimans County adult maltreatment victims were outreach and information and referral.

Table 63. 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
Perquimans County	40	13	27	2	19	1	1	0	0	0	0
<i>Regional Average</i>	31	16	14	4	6	1	1	1	0	0	0
Pamlico County	27	9	18	1	9	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
Perquimans County	36	14	22	8	14	1	1	2	0	0	0
<i>Regional Average</i>	35	21	14	3	7	1	1	1	0	0	0
Pamlico County	11	4	7	4	4	0	0	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 64 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 Perquimans County population overall (age 0-64) without health insurance increased between 2006-07 and 2008-9 before falling again the next biennium.
- 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 Perquimans County decreased from 9.8% in 2006-2007 to 7.7% in 2010-2011, a 21% improvement.

Table 64. 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
Perquimans County	9.8	25.4	20.6	10.1	25.0	21.1	7.7	21.5	17.8
Regional Average	11.6	24.4	20.4	10.2	24.2	20.1	7.8	21.4	17.6
Pamlico County	7.5	23.3	18.8	10.0	23.5	20.3	7.9	20.2	17.2
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 (34).

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 (35). In NC, the maximum income limit for participation in the NCHC program is 200% of the Federal Poverty Guideline.

Table 65 presents enrollment figures for NCHC for FY2008 through 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 Perquimans County and NC as a whole the *number* of children eligible increased from year to year during the period shown.
- In Perquimans County the *percent* of eligible children enrolled in Health Choice increased 62% between FY2008 and FY2009, and 49% between FY2009 and FY2010. In FY2010 76% of the eligible children were enrolled in Health Choice.

Table 65. 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
Perquimans County	187	59	31.6	190	97	51.1	195	148	75.9
Regional Average	283	207	63.7	284	218	70.2	282	216	72.9
Pamlico County	185	135	73.0	180	142	78.9	165	158	95.8
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 66 summarizes data on Medicaid eligibility and expenditures for the period from FY2008 through FY2010.

- While the number of Perquimans County residents eligible for Medicaid increased from one year to the next throughout the period cited, the percent eligible was static at 19.0%.
- The expenditure/cost per adult enrollee in Perquimans County rose from FY2008 to FY2009 and decreased slightly in FY2010.
- Perquimans County had the highest proportion of Medicaid-eligible residents of the four jurisdictions throughout the period cited, averaging 19.0%. The average statewide was approximately 16%.

**Table 66. 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
Perquimans County	2,382	19.0	\$5,993	2,485	19.0	\$6,868	2,506	19.0	\$6,647
<i>Regional Average</i>	3,286	17.1	\$6,597	3,441	17.7	\$6,673	3,543	17.9	\$6,389
Pamlico County	2,108	16.0	\$8,615	2,149	17.0	\$8,941	2,356	18.0	\$8,249
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. In SFY2011-12, Perquimans County DSS took an average of 97 applications for Medicaid each month, and carried an average monthly caseload of 2,129 Medicaid clients (36).

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 (37).

Table 67 presents a four-year summary of the participation of eligible children in the NC HealthCheck program.

- The participation ratio for Perquimans County children decreased 41% between FY2007-08 and FY2010-11 even as the number of eligible children due initial or periodic Health Check EPSDT services increased 53% during the same period. Similar phenomena were observed in the other three jurisdictions as well.
- The Health Check participation ratio in Perquimans County was the lowest among the four jurisdictions during the last two fiscal years cited.

**Table 67. 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
Perquimans County	1,585	848	74.3	1,597	859	75.0	1,628	1,400	46.4	1,590	1,301	44.2
<i>Regional Average</i>	2,181	1,175	72.6	2,235	1,211	71.8	2,282	1,955	47.2	2,296	1,896	46.1
Pamlico County	1,382	720	82.4	1,413	747	96.9	1,487	1,278	60.6	1,492	1,269	55.2
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 ACCESS and ACCESS II/III, which are primary care case management health plans (38).

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; Perquimans 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 68 summarizes CCNC/CA enrollment data for the period from 2007-2010.

- The percent of Medicaid eligible persons in Perquimans County enrolled in CCNC/CA increased 23% overall between 2007 and 2010, while the number of county residents enrolled in Medicaid increased by 10% over the same period.
- 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 68. 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
Perquimans County	2,275	52	2,382	43	2,485	60	2,506	64
<i>Regional Average</i>	3,210	61	3,286	59	3,441	63	3,543	61
Pamlico County	2,027	60	2,108	58	2,149	60	2,356	65
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 69 summarizes dual Medicare/Medicaid enrollment data for the period from 2007-2010.

- The highest percentage of dual enrollees every year was in Pamlico County; NC as a whole had the lowest percentage each year. The percentage for Perquimans County was second-lowest each year.

Table 69. Medicare/Medicaid Dual Enrollment (2007-2010)

Location	Percent of Eligibles Dually Enrolled			
	2007	2008	2009	2010
Perquimans County	19.2	18.2	17.5	17.0
<i>Regional Average</i>	19.4	19.0	18.0	17.4
Pamlico County	21.7	20.8	19.4	17.7
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 70 presents those data (which for simplicity's sake will be referred to simply as the "ratio") for Perquimans County, Pamlico 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 Perquimans County ratios for all health professionals were the lowest among the five jurisdictions being compared for all categories of health professionals in all years cited *except* dentists in 2009 and 2010.
- Perquimans County ratios for physicians (MDs) and pharmacists (Pharms) improved between 2009 and 2011, but ratios for dentists (DDSs) and registered nurses (RNs) worsened over the same period.

Table 70. 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
Perquimans County	1.5	1.5	3.1	32.4	2.3	2.2	1.5	2.2	17.8	3.0	2.2	1.5	1.5	22.2	3.0
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
Pamlico County	4.7	3.9	3.1	40.5	4.6	4.6	3.8	3.8	34.2	5.3	6.1	4.5	3.8	38.6	6.1
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>.

Since the health professional ratio for dentists in Perquimans County and the Albemarle region are low to begin with, accessing dental care may be a tremendous problem for Medicaid enrollees. Table 71 lists dental practices in the Albemarle Region (i.e., northeastern NC and southeastern VA) that accept Medicaid and/or NC Health Choice clients. None of these practices were in Perquimans County. 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 71. 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 72 lists the number of active health professionals in Perquimans County and the ARHS region, by specialty, for 2011:

- There was no representation in Perquimans County from the specialties of: general practice, obstetrics and gynecology, pediatrics, certified nurse midwifery, chiropractic, physical therapy, podiatry, psychology, and respiratory therapy. Neither were there any nurse practitioners in the county at the time of the count.
- There were fewer than five practitioners in Perquimans County in all the remaining specialties listed except for registered nurses, licensed practical nurses, and dental hygienists.
- At the regional level there were no general practitioners and only one podiatrist listed in 2011.

Table 72. Number of Active Health Professionals, by Specialty (2011)

Category of Professionals	Perquimans County	Regional Total
Physicians		
Primary Care Physicians	2	64
<i>Family Practice</i>	1	23
<i>General Practice</i>	0	0
<i>Internal Medicine</i>	1	21
<i>Obstetrics/Gynecology</i>	0	11
<i>Pediatrics</i>	0	9
Other Specialities	1	96
Dentists and Dental Hygienists		
Dentists	2	26
Dental Hygienists	6	29
Nurses		
Registered Nurses	30	823
<i>Nurse Practitioners</i>	0	28
<i>Certified Nurse Midwives</i>	0	6
Licensed Practical Nurses	12	284
Other Health Professionals		
Chiropractors	0	10
Occupational Therapists	1	22
Occupational Therapy Assistants	4	15
Optometrists	1	6
Pharmacists	4	67
Physical Therapists	0	36
Physical Therapy Assistants	2	41
Physician Assistants	2	33
Podiatrists	0	1
Practicing Psychologists	0	12
Psychological Assistants	1	9
Respiratory Therapists	0	32

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 73 lists the number of general hospital beds in the four jurisdictions being included in this report. There is no hospital in either Perquimans County or Pamlico County.

**Table 73. Number of General Hospital Beds¹
(2004-2010)**

Location	2004	2005	2006	2007	2008	2009	2010
Perquimans County	0	0	0	0	0	0	0
<i>Regional Average</i>	37	34	34	34	34	34	34
Pamlico County	0	0	0	0	0	0	0
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.

Other Hospitals

Table 74 lists the eight hospitals in northeastern NC that serve residents of Perquimans County. Of these, only Vidant Medical Center in Greenville offers a Trauma Center (rated for Level I care).

**Table 74. 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 Nursing Home - 40	Shared inpatient/ambulatory surgery - 3 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 Psychiatric - 28	C-section - 1 Shared inpatient/ambulatory surgery - 3 Endoscopy - 1
Martin County			
Martin General Hospital	Williamston	General - 49	
Pasquotank County			
Albemarle Hospital	Elizabeth City	General - 182	C-section - 2 Shared inpatient/ambulatory surgery - 8 Endoscopy - 3
Pitt County			
Vidant Medical Center	Greenville	General - 748 Rehabilitation - 75 Psychiatric - 52	C-section - 4 Shared inpatient/ambulatory surgery - 26 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>.

Residents of Perquimans County also might seek medical services in southeastern VA, primarily in the area referred to as the *Tidewater Region*. Table 75 lists hospitals in the cities in this region.

**Table 75. 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>.

Since there is no hospital in Perquimans County, other facilities in the region see all Perquimans County residents who need hospital care.

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.

The 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. Vidant Roanoke-Chowan Hospital (VROA) also provided utilization data which will be used as appropriate. Presented here are demographic summaries of the population of Perquimans County residents who were admitted to the emergency departments of Vidant Bertie, Vidant Chowan, Vidant Roanoke Chowan and Albemarle Hospitals in recent years.

Emergency Department Admission Demographics

While the majority of Perquimans County residents who need hospital services visit Albemarle Hospital and Vidant Chowan Hospital, they do occasionally visit the other two nearest hospitals

in the region as well. Table 76 summarizes the total of ED visits by Perquimans County residents at each of those four hospitals for the period FY2010-FY2012.

Table 76. Emergency Department Admissions, Perquimans County Residents, by Hospital (FY2010-FY2012)

Hospital	Number of ED Admissions		
	2010	2011	2012
Vidant Bertie Hospital	23	17	13
Vidant Chowan Hospital	1,572	1,905	2,129
Vidant Roanoke-Chowan Hospital	9	20	17
Albemarle Hospital	3,346	4,068	4,905
Total No. ED Visits by Perquimans County Residents	4,950	6,010	7,064

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

Residence (Table 77)

- Since very few Perquimans County residents visit the EDs of either Vidant Bertie Hospital or Vidant Roanoke-Chowan Hospital (see above), the Perquimans County component is a small fraction of total ED traffic in those EDs. The data below refers instead to the EDs of Vidant Chowan Hospital and Albemarle Hospital only.
- Over the three-year period cited 13.3% of all Emergency Department admissions of ARHS Region patients at Vidant Chowan Hospital and Albemarle Hospital were residents of Perquimans County.
- The largest proportion of Perquimans County residents who were admitted to the EDs of these hospitals in each year cited (three-year average of 12.0% of all ED admissions of ARHS region residents to the two hospitals) were residents of Hertford.

Table 77. Percent ED Admissions by Patient Residence, Perquimans County Residents, Vidant Chowan Hospital and Albemarle Hospital (FY2010-FY2012)

Location	Percent of ED Admissions		
	2010	2011	2012
Belvidere	0.9	0.8	0.9
Hertford	11.8	11.8	12.4
Winfall	0.5	0.5	0.4
Total Perquimans County Patients	13.2	13.1	13.7
Total No. ED Visits by ARHS Region Residents	37,531	45,914	51,585

Source: Vidant Chowan Hospital and Albemarle Health.

Age (Table 78)

- The largest proportion of Perquimans County residents who were admitted to the two EDs in each year cited were adults between the ages of 18 and 64. The pediatric population (under the age of 18) composed the second largest proportion.

**Table 78. Percent ED Admissions by Patient Age, Perquimans County Residents
Vidant Chowan Hospital and Albemarle Hospital
(FY2010-FY2012)**

Age Group	Percent of ED Admissions		
	2010	2011	2012
Adult	8.3	8.4	8.8
Pediatric	2.5	2.5	2.5
Senior	2.4	2.2	2.4
Total Perquimans County Patients	13.2	13.1	13.7
Total No. ED Visits by ARHS Region Residents	37,531	44,914	50,585

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

Race (Table 79)

- Whites composed the largest proportion of Perquimans County residents admitted to the two EDs; whites from Perquimans County composed an annual average of 8.1% of all ED admissions of ARHS region residents to the two hospitals over the period cited.
- Blacks composed the second-largest proportion of Perquimans County residents admitted to the two EDs; blacks from Perquimans County composed an annual average of 5.0% of all ED admissions of ARHS region residents to the two hospitals over the period cited.

**Table 79. Percent ED Admissions by Patient Race, Perquimans County Residents
Vidant Chowan Hospital and Albemarle Hospital
(FY2010-FY2012)**

Race/Ethnicity	Percent of ED Admissions		
	2010	2011	2012
Asian	<0.1	<0.1	<0.1
Black	5.0	5.0	5.0
Hispanic	0.1	0.2	0.2
Indian (Native or Alaskan)	<0.1	<0.1	<0.1
Other	<0.1	<0.1	<0.1
Unknown	<0.1	<0.1	<0.1
White	7.8	7.9	8.6
Total Perquimans County Patients	13.2	13.1	13.7
Total No. ED Visits by ARHS Region Residents	37,531	44,914	50,585

Source: Vidant Chowan Hospital and Albemarle Health.

Payer (Table 80)

- Medicaid was the predominant primary payer among Perquimans County residents who were admitted to the two EDs over the period cited, averaging 3.8% of all ED visits by ARHS region residents annually.
- Medicare was the second-most frequent primary payer among Perquimans County admissions to the EDs, averaging 3.1% of all visits by ARHS region residents annually.
- Self-pay admissions composed the third-most frequent payer group, averaging 2.9% of all visits by ARHS region residents annually.

**Table 80. Percent ED Admissions by Payer Group, Perquimans County Residents
Vidant Chowan Hospital and Albemarle Hospital
(FY2010-FY2012)**

Payer Group	Percent of ED Admissions		
	2010	2011	2012
Agencies	<0.1	<0.1	<0.1
CHAMPUS, VA or other Military	0.5	0.6	0.6
Commercial/Managed Care	3.0	2.7	2.7
Medicaid	3.7	3.8	4.0
Medicare	3.0	3.0	3.2
Self-pay	2.9	2.9	3.0
Workman's Compensation	0.1	0.1	0.1
Other	<0.1	<0.1	0.1
Total Perquimans County Patients	13.2	13.1	13.7
Total No. ED Visits by ARHS Region Residents	37,531	44,914	50,585

Source: Vidant Chowan Hospital and Albemarle Health.

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

Perquimans County Emergency Medical Services

Perquimans County EMS (PCEMS), a county owned and operated service, is headquartered in Hertford, NC. The Perquimans County Communications office has shared data summarizing the nature of medically-oriented EMS calls for 2010 through 2012 (Table 81). Note that the table displays only categories of calls totaling five or more in a single year.

- The specifically named categories (i.e., excluding categories like “miscellaneous illness”, and “other”) with the largest average numbers of annual calls were, in descending order, breathing difficulty (171), falls (163), chest pain (120), and pain (115).

**Table 81. Medical Service Calls by Perquimans County EMS
(2010-2012)**

Nature of Call	Number of Calls			Nature of Call	Number of Calls		
	2010	2011	2012		2010	2011	2012
Abdomen	4	11	14	Headache	6	17	22
Accident 10-50	100	95	92	Heart attack	0	2	15
Alarm/medical	5	2	5	High blood pressure	8	15	11
Allergic reaction	11	19	16	High/low blood pressure	20	14	8
Arm pain	2	6	2	Hip/leg pain	11	2	5
Asthma attack	9	8	9	Laceration	4	3	5
Back injury	1	6	8	Leg injury	4	6	8
Bleeding	32	26	46	Lifeline alert	27	27	27
Blood clot	6	2	0	Mental subject T96	9	8	6
Breathing difficulty	182	152	179	Miscellaneous illness	180	161	136
Cancer patient	5	6	11	Other	45	22	46
Cardiac	49	48	28	Overdose (total)	17	14	10
Chest pain	117	109	134	Pain	116	118	110
Choking	5	6	5	Pregnant	13	7	6
Congestive	5	3	1	Respiratory distress	9	8	10
Cuts/cutting	6	3	6	Seizures	64	77	65
Dehydrated	4	9	14	Service call C23	8	8	3
Diabetic	42	42	31	Shoulder injury	1	5	0
Diarrhea	2	4	8	Stroke	35	32	31
Disorientation	9	9	11	Suicide C41	7	5	4
Dizzy/weak	22	17	35	Transport patient	6	9	8
DOA T79	9	10	5	Unconscious	13	12	12
Fainting	14	24	32	Unresponsive	32	29	37
Falls	167	163	160	Vomiting	25	41	27
Fever/high temperature	14	17	12	Weak/dizzy	9	7	17
Fracture	4	3	7	Well being C89	11	11	11
Head injury	5	6	9	TOTAL CALLS	1,752	1,733	1,780

Source: Homeria V. Jennette, Director, Perquimans County Communications. Personal communication to Ashley H. Stoop, Preparedness Coordinator and Safety Officer, Albemarle Regional Health Services, December 7, 2012.

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 (39).

Perquimans County Health Department

Services offered at the Perquimans County Health Department, physically located in Hertford, NC, include: clinical services, WIC, health education and promotion, environmental health, preparedness and response, Albemarle Home Care, Albemarle Hospice, Inter-County Public Transportation Authority, Perquimans-Chowan-Gates (PCG) Landfill and Convenience Sites, Albemarle Solid Waste Management 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 blood 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 including 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. Referrals are made to the High Risk Perinatal Clinic at the Pasquotank County Health Department. 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

Referrals for individuals living with diabetes and their families are made to the comprehensive Diabetes Care Center located at the Pasquotank County Health Department. The Albemarle Regional Diabetes Program works to counsel 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

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.

Perquimans-Chowan-Gates (PCG) Landfill and Convenience Centers

PCG is a recyclable materials wholesaler. The landfill itself is located in Belvidere, in Perquimans County. The landfill also maintains 13 convenience sites: four in Chowan County, five in Perquimans County, and four in Gates County. The convenience sites accept recyclables, yard waste, scrap metals, appliances, furnishings, household waste, motor oil, oil filters, and antifreeze.

Albemarle Solid Waste Management Authority

Albemarle Regional Solid Waste Management Authority is a county-level legal entity serving the counties of Perquimans, Chowan, Gates, Dare, Currituck, Hyde, and Tyrrell. This area currently has approximately 107,000 permanent residents and several hundred thousand visitors each year. Through a 26-year contract signed in 2009 with Republic Services of NC, LLC, the Authority aims to provide cost-effective and efficient solid waste disposal for the region.

All municipal wastes and most of the construction and demolition debris from the Authority's members are landfilled in the East Carolina Environmental Landfill in Bertie County (owned by Republic Services of NC). The waste is primarily sent there through the three transfer stations located in Dare County, Currituck County, and Perquimans County. The towns and counties operate their own solid waste and recycling collection programs.

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 82 summarizes the demographic profile of clients who patronized the Perquimans County Health Department in 2012 compared to comparable averages for all of Albemarle Regional Health Services.

- Children under the age of 18 composed 26% of all Perquimans County Health Department patients; ARHS-wide the comparable percentage was 31%.
- Persons ages 45-64 composed 22% of the health department patients in Perquimans County; ARHS-wide the comparable percentage was 19%.
- The largest proportion of Perquimans County Health Department patients—60%--were white. African Americans and whites each composed 47% of patients ARHS-wide.
- Females composed 73% of Perquimans County Health Department patients and 75% of ARHS patients.

Table 82. Demographic Profile of Patients, Perquimans County Health Department and ARHS: Age, Race and Sex (2012)

Demographic Parameter	Unduplicated Counts			
	Perquimans		Agency-Wide	
	Patients	Visits	Patients	Visits
Age				
0-17	305	428	4,531	7,546
18-24	193	450	2,539	6,093
25-34	179	417	2,317	5,427
35-44	127	251	1,437	2,797
45-54	131	230	1,476	2,636
55-64	124	169	1,265	1,898
65+	107	187	899	1,609
Total	1,166	2,132	14,464	28,006
Race				
American Indian/Alaskan Native	2	2	10	21
Asian	4	6	121	254
Black/African American	418	877	6,388	13,214
Native Hawaiian/Pacific Islander	2	6	14	31
Unknown	43	102	582	1,402
White	697	1,139	7,349	13,084
Total	1,166	2,132	14,464	28,006
Sex				
Female	846	1,681	10,077	21,094
Male	320	451	4,387	6,912
Total	1,166	2,132	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 83 summarizes the payer profile for services utilized by patients of the Perquimans 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 Perquimans County Health Department—43%--was the “patient pay only” category.
- Adult Health was the Perquimans County Health Department program with the largest number (248) and percent (47%) of “patient pay only” clients.
- Medicaid only or some combination of Medicaid and another payer composed the second largest proportion of all payers, 36%.
- HealthCheck Child Health Physicals was the program with the largest proportion of Medicaid payers (86%), which is expected since HealthCheck is a Medicaid-mandated program.

**Table 83. Payer Profile, Perquimans 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	444	701	9	1	35	248	3	22	89	407
Child Health	36	52	1	0	16	9	0	0	1	27
Family Planning	234	584	23	4	62	102	1	0	5	197
HealthCheck Child Health Physicals	85	86	0	0	70	6	0	0	5	81
Immunization	365	409	2	2	92	122	7	27	93	345
Maternal	25	117	5	1	15	3	0	0	0	24
Pregnancy Tests	101	113	8	0	67	24	0	0	1	100
STD	80	103	0	0	24	16	0	0	0	40
Tuberculosis	7	9	0	0	1	2	0	0	0	3
TOTAL	1,377	2,174	48	8	382	532	11	49	194	1,224

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 (40).

The US Health Resources and Services Administration (HRSA) lists no FQHC in Perquimans County as of March 23, 2013, but did list one for neighboring Chowan County: Gateway Community Health Center, in Tyner (41).

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 (42):

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 programming 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 84 summarizes the percent of visits by ZIP code; Table 85 summarizes the payers.

According to data in Table 84:

- 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 84. 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 85, the largest proportion of patients at Gateway Community Health Centers are self-pay (44%), followed by those covered by commercial insurance (31%).

Table 85. 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 Perquimans County Schools local education authority (LEA) employs the nurses in the district's schools (43).

Table 86 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 Perquimans County Schools for the two-year period cited was 862:1, above the recommended maximum of 750:1.

**Table 86. Student to School Nurse Ratio
(SY2009-10 and SY2010-11)**

Location	Student to School Nurse Ratio	
	SY2009-2010	SY2010-2011
Perquimans County	863	860
<i>Regional Average</i>	713	712
Pamlico County	272	316
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 87 presents local data that Perquimans County 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 87. School Health Nursing Survey Results, Perquimans County 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	4	Insulin injection	6
Asthma	24	Insulin pump	5
Child abuse/neglect	3	Glucagon injection	6
Chronic illness not otherwise listed	0	Nebulizer treatment	5
Depression (situational or chronic)	6	Pulse oximeter	0
Diabetes	13	Respirator care	0
Hygiene	10	Shunt care	0
Mental health issues not otherwise listed	6	Tracheal suctioning (including tracheostomy care)	0
Pregnancy	9	Stoma care (other than tracheal)	0
Puberty; reproductive health	7	Tube feeding	2
Seizure disorders	2	Vagal Nerve Stimulator	0
Severe allergies	1	Other	0
Sickle cell	0	Identified Health Conditions among Students (Abridged list)	
Substance abuse (including tobacco, prescription drugs, etc.)	1	ADD/ADHD	14
Suicidal ideation	0	Allergies (severe)	10
Violence/bullying	0	Asthma	86
Injury/illness that began or occurred outside school	7	Autistic disorders, including Asperger's Syndrome	9
Student Medications		Cardiac condition	3
Students on long-term medications	17	Cerebral palsy	1
Students on short-term medications	4	Diabetes Type I	6
Students on PRN (non-emergency) medications	10	Diabetes Type II	1
Students on emergency medications	93	Emotional/behavioral/psychiatric disorder not otherwise listed	0
Health Care Procedures Administered		Gastrointestinal disorders (Crohn's, celiac disease, IBS, etc.)	0
Blood glucose monitoring	6	Hearing loss	1
Clean intermittent catheterization	0	Migraine headache	4
Central venous line monitoring	0	Obesity >95%ile BMI	0
Diastat (rectal Valium)	2	Renal/adrenal/kidney conditions including Addison's disease	2
Epinephrine auto injector	8	Seizure disorder/epilepsy	7
Insulin injector	6	Visually impaired (uncorrectable)	0

Source: 2011-12 End of Year School Health Report, Section 2; personal communication from Claudia Bunch, Perquimans County Schools to Dana Hamill, Public Health Educator, Albemarle Regional Health Services, Perquimans County Health Department, January 14, 2013.

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 88 lists by name all facilities in Perquimans County.

Table 88. NC-Licensed Long-Term Care Facilities in Perquimans County (November, 2012)

Facility Type/Name	Location	# Beds SNF (ACH) ¹	Star Rating (If applicable)
Adult Care Homes/Homes for the Aged			
Country Oaks	Hertford	24	4
South Haven Manor	Hertford	24	3
Family Care Homes			
Lillian Brothers Family Care Home	Hertford	3	no rating
Russell's Rest Home	Hertford	6	4
Winfall Manor	Winfall	5	4
Nursing Homes/Homes for the Aged			
Brian Center Health and Rehabilitation - Hertford	Hertford	78 (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 (44).

Table 89 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 was one nursing home listed for Perquimans County: Brian Center Health and Rehabilitation in Hertford (78 beds).

Table 89. Number of Nursing Facility Beds (2005-2011)

Location	2005	2006	2007	2008	2009	2010	2011
Perquimans County	78	78	78	78	78	78	78
<i>Regional Average</i>	118	118	118	118	118	118	118
Pamlico County	96	96	96	96	96	96	96
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 (45).

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.

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 (46).

- At the time this report was prepared there were two state-licensed adult care homes in Perquimans County: Country Oaks (24 beds, four stars) and South Haven Manor (24 beds, three stars), both located in Hertford.
- In addition, there were three state-licensed family care homes in Perquimans County: Lillian Brothers Family Care Home in Hertford (three beds, no star rating), Russell's Rest Home in Hertford (six beds, four stars) and Winfall Manor in Winfall (five beds, four 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 90 below lists the home care, home health, and hospice providers in Perquimans 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 90. NC-Licensed Home Care, Home Health and Hospice Service Providers in Perquimans County (As of March, 2013)

Provider Name	Location
Albemarle Home Care	Hertford
Rooted and Grounded, Inc. Family Care Agency	Hertford

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

Table 91 presents a demographic profile of the clients of Albemarle Home Care – Home Health Division for FY2011-12.

- Approximately 16% of the agency’s home health clients lived in Perquimans County.

Table 91. 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 (NCDAAAS), 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 NCDAAAS. 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 (47).

Adult day health services are similar programs to adult day care programs 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 NCDAAAS, 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 (48). There is one adult day health facility in the Albemarle Region: DayBreak, located in Elizabeth City (Pasquotank County).

DayBreak

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 (49).

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 (50).

At the time this report was prepared, the LME for Perquimans 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 92 (on the following page) lists ECBH network providers serving Perquimans County residents.

It should be noted, however, that the list of ECBH providers is a master list of those offering services throughout the LME's 19-county service area; at the present time only one network provider was physically located in Perquimans County, in Hertford.

**Table 92. East Carolina Behavioral Health Network Providers Serving Perquimans 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 Physicians 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 Perquimans County, as shown in Table 92. These facilities all offer supervised living for developmentally disabled adults.

Table 93. NC-Licensed Mental Health Facilities in Perquimans County (G.S. 122C) (November, 2012)

Operator/Name of Facility	Location	Category	Capacity
Christian Court	Hertford	Supervised living, developmentally disabled adult	4
Perquimans County Group Home	Hertford	Supervised living, developmentally disabled adult	6
TLC on the Water	Hertford	Supervised living, developmentally disabled adult	6

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 94 lists other healthcare facilities in the Albemarle Region that are licensed by the state of NC. Note that none was physically located in Perquimans County

- 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 94. 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 95 lists dialysis centers in the Albemarle Region, none of which was physically located in Perquimans County.

Table 95. 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 are no free-standing urgent care centers listed for Perquimans County, but Internet searches identified urgent care centers in Washington, NC and Elizabeth City, NC. Perquimans County residents with urgent (and evening, weekend and holiday) health issues are most likely to report to Vidant Chowan Hospital, Albemarle Hospital, or another area hospital.

Other Perquimans County Healthcare Practitioners/Practices

Table 96 presents a partial list of the healthcare practitioners and practices in Perquimans County that are *not* affiliated with one of the region's hospitals. This list was developed from searches of various Internet sites and checked against current telephone directories. There is no way to verify the absolute currency of this list.

Table 96. Healthcare Practitioners/Practices in Perquimans County (As of March 28, 2013)

Provider/Practice Name	Location	Specialty
Boone, Jack, DDS	Hertford	Dentistry
Boyce, Mary N, PA-C	Hertford	Family Medicine
Coastal Carolina Family Practice	Hertford	Family Medicine
DeNunzio, Neil L., MD	Winfall	Internal Medicine
Ford, Erica, PA	Hertford	Family Medicine
Khorram, Nikta, PA	Hertford	Family Medicine
Lane, Robert E., MD	Hertford	Family Medicine
RMS Perquimans County Medical Center	Winfall	Internal Medicine
Therapy House	Hertford	Physical & Occupational Therapy

Source: Various Internet sources

Recreational Facilities

Table 97 lists some of the recreational facilities and opportunities in Perquimans County that are accessible to the general public; the table also lists some of the many sites of cultural and/or historical significance in the county. Table 98 lists some of the private and/or membership-based recreational facilities in the county. This list was compiled from public domain sources in April, 2013 and may or may not be current at the present time.

Table 97. Recreational and Cultural Facilities and Opportunities in Perquimans County

Category/Name	Location	Facilities/Programs
Recreational Facilities and Opportunities		
Perquimans County Community Center	Hertford	Fitness and art classes, youth programs, sports teams
Perquimans County Tennis Courts	Hertford	Tennis
Perquimans County Basketball Courts	Hertford	Youth sports teams; free-play
Perquimans County Athletic Fields	Hertford	Youth sports teams; free-play
Camping Platforms	Bear Garden, Cypress Woods, Mill Creek	Camping platforms at various sites on the Perquimans River
Perquimans County Walking Trail	Hertford	20 walking trails throughout the county
Paddling Trails	Various access points	40 miles of river and creek trails
Biking Trails	Hertford	4 trails
Birding Trails	Various access points	For exploration by canoe or kayak
Cultural and Arts Opportunities		
Historic Hertford	Hertford	Historical/interpretive museum
Newbold-White House	Hertford	Historical/interpretive museum
Summer Breeze Concert Series	Hertford	Seasonal concerts

Sources:

Perquimans County, NC, Departments, Recreation; <http://www.co.perquimans.nc.us/departments/recreation.html>

Paths of Perquimans, Trails/Maps; <http://www.pathsofperquimans.org/index.html>

NC Arts Council, Perquimans County; <http://www.ncarts.org/county.cfm?county=Perquimans>

Table 98. Private/Membership Recreational Facilities in Perquimans County

Name	Location	Facilities/Programs
Sound Golf Links, Albemarle Plantation	Hertford	18-hole, semi-private golf course; driving range

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 Perquimans 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 Perquimans 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:

$$\text{(number of new cases/population)} \times 100,000 = \text{new cases per 100,000 people}$$

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:

$$\text{(number of deaths due to a cause/population)} \times 100,000 = \text{deaths per 100,000 people}$$

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 of 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 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)

Perquimans 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 Perquimans 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 Perquimans 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 99 shows where NC stood in the 2012 rankings relative to the “best” and “worst” states, where first-ranked is best.

Table 99. 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 100 presents the 2013 county rankings for Perquimans County, the ARHS regional average and Pamlico County in terms of health outcomes and health factors; Table 101 presents additional detail for these jurisdictions as well as the average for NC and national benchmarks.

- Perquimans County ranks 71st overall in NC.
- The best Perquimans County rankings are in the health factors of physical environment (3rd), social and economic factors (34th), and clinical care (44th).

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 100. County Health Rankings
(2013)**

Location	County Rank (Out of 100) ¹						Overall
	Health Outcomes		Health Factors				
	Mortality	Morbidity	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	
Perquimans County	69	68	61	44	34	3	71
Regional Average	49	60	57	43	38	26	53
Pamlico County	82	4	17	10	27	29	34

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 101. County Health Rankings Details
(2013)**

Health Factor		Perquimans County	ARHS Regional Average	Pamlico County	NC County Average	National Benchmark ¹
Mortality						
	Premature deaths	8,837	8,109	9,428	7,480	5,317
Morbidity						
	Poor or fair health	22%	21%	17%	18%	10%
	Poor physical health days	4.7	4.1	2.2	3.6	2.6
	Poor mental health days	2.9	3.0	1.7	3.4	2.3
	Low birthweight	10.1%	10.5%	8.6%	9.1%	6.0%
Health Factors						
	Health Behaviors					
	Adult smoking	N/A	23.5%	17%	21%	13%
	Adult obesity	33%	33%	28%	29%	25%
	Physical inactivity	28%	28%	27%	25%	21%
	Excessive drinking	12%	11%	5%	13%	7%
	Motor vehicle crash death rate	19	23	32	17	10
	Sexually transmitted infections	297	407	274	441	92
	Teen birth rate	48	44	55	46	21
	Clinical Care					
	Uninsured	18%	0	20%	19%	11%
	Primary Care physicians	4497:1		2188:1	1480:1	1067:1
	Dentists	13574:1		3458:1	2171:1	1516:1
	Preventable hospital stays	59	68	46	63	47
	Diabetic screening	82%	86%	90%	88%	90%
	Mammography screening	77%	72%	78%	69%	73%
	Social & Economic Factors					
	High school graduation	84%	82%	88%	80%	N/A
	Some college	53%	53%	52%	62%	70%
	Unemployment	10.4%	9.8%	10.3%	10.5%	5.0%
	Children in poverty	31%	27%	33%	25%	14%
	Inadequate social support	N/A	15%	8%	21%	14%
	Children in single-parent households	29%	36%	30%	35%	20%
	Violent crime rate	123	210	196	411	66
	Physical Environment					
	Daily fine particulate matter	12.3	12	12.4	12.9	8.8
	Drinking water safety	0%	0%	0%	3%	0%
	Access to recreational facilities	7	5	8	11	16
	Limited access to healthy foods	1%	4%	2%	7%	1%
	Fast food restaurants	40%	47%	60%	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 102 presents total annual pregnancy, fertility and abortion rates for women age 15-44 for the period from 2007-2011.

- The *total pregnancy rate* in Perquimans County was lower than the total pregnancy rate for NC in every year cited. The total pregnancy rate in Perquimans County decreased by 9% overall between 2007 and 2011.
- The *total fertility rate* in Perquimans County was lower than the total fertility rate for NC in every year cited except 2011. The total fertility rate in Perquimans County decreased by 7% overall between 2007 and 2011.
- The *total abortion rate* in Perquimans County was lower than the total abortion rate for NC in every year cited. The total abortion rate in Perquimans County decreased by 26% overall between 2007 and 2011, although the abortion rate in the county in 2010 was the highest among the comparators.

Table 102. 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
Perquimans County	78.4	66.7	11.3	67.4	54.8	12.6	69.9	59.0	10.4	75.8	61.9	13.9	71.2	62.3	8.4
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
Pamlico County	68.9	54.7	14.2	66.5	58.6	7.9	66.2	54.9	11.4	71.5	57.6	11.7	59.3	49.3	10.0
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 103 presents pregnancy, fertility, and abortion rates stratified according to the new model.

- The pregnancy rate in Perquimans County was highest among African American non-Hispanics in 2010 and among white non-Hispanics in 2011. The fertility rate was highest among white non-Hispanics in both years. The abortion rate in 2010 was highest among African American non-Hispanics; all the stratified abortion rates in 2011 were unstable.

Table 103. 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
Perquimans County Total	75.8	61.9	13.9	71.2	62.3	8.4
White, Non-Hispanic	74.1	63.8	10.3	71.5	65.3	5.6
African American, Non-Hispanic	85.2	62.7	22.5	67.0	50.3	16.8
Other, Non-Hispanic	111.1	111.1	0.0	47.6	47.6	0.0
Hispanic	0.0	0.0	0.0	102.6	102.6	0.0
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
Pamlico County Total	71.5	57.6	11.7	59.3	49.3	10.0
White, Non-Hispanic	69.1	55.8	11.8	59.3	48.9	10.4
African American, Non-Hispanic	80.2	61.7	15.4	38.2	32.4	5.9
Other, Non-Hispanic	0.0	0.0	0.0	69.0	69.0	0.0
Hispanic	98.8	86.4	0.0	141.2	117.6	23.5
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 104 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 Perquimans County teens was higher than the total pregnancy rate for teens in the other jurisdictions in 2007. After that date, Pamlico County teens consistently had the highest pregnancy rates. The 2011 pregnancy rate for Perquimans County teens was unstable, but prior to that the teen pregnancy rate in the county fell 40% between 2007 and 2010.
- The *total fertility rate* among Perquimans County teens was highest among the comparators in 2007 and 2009; in 2008, 2010 and 2011 the fertility rate was highest among Pamlico County teens. The 2011 fertility rate for Perquimans County teens was

unstable, but prior to that the fertility rate among Perquimans County teens decreased 31% between 2007 and 2010.

- Total abortion rates for teens in the counties were unstable.

Table 104. 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
Perquimans County	86.0	63.0	20.1	56.3	42.3	14.1	55.6	48.0	7.6	51.3	43.6	7.7	21.0	15.7	5.2
<i>Regional Average</i>	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
Pamlico County	59.8	43.2	16.6	81.7	76.1	5.6	64.1	39.0	25.1	82.2	62.3	17.0	59.3	41.5	17.8
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 105 presents racially/ethnically stratified pregnancy, fertility and abortion data for teens. Racially stratified rates among minority teens are mostly too unstable for comparison.

Table 105. 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
Perquimans County Total	51.3	43.6	7.7	21.0	15.7	5.2
White, Non-Hispanic	51.7	43.1	8.6	4.3	4.3	0.0
African American, Non-Hispanic	55.6	48.6	6.9	45.5	30.3	15.2
Other, Non-Hispanic	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic	0.0	0.0	0.0	71.4	71.4	0.0
<i>Regional Average Total</i>	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
Pamlico County Total	82.2	62.3	17.0	59.3	41.5	17.8
White, Non-Hispanic	77.8	55.6	18.5	61.0	40.7	20.3
African American, Non-Hispanic	92.3	76.9	15.4	41.1	41.1	0.0
Other, Non-Hispanic	0.0	0.0	0.0	0.0	0.0	0.0
Hispanic	125.0	125.0	0.0	125.0	62.5	62.5
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 106 presents trend data on the number of teen pregnancies in each jurisdiction from 2003-2011.

**Table 106. 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
Perquimans County	25	23	30	26	30	24	22	20	8
Regional Average	36	38	47	46	43	37	38	31	28
Pamlico County	21	24	26	23	18	29	23	29	20
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 107 presents trend data on the number of adolescent pregnancies in each jurisdiction from 2003-2011.

**Table 107. 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
Perquimans County	1	1	0	2	1	0	0	1	0
Pamlico County	0	0	1	0	0	1	0	0	0
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 108 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 among women age 30 or older were lowest among the comparators in Perquimans County.
- The percentage of short-interval births also was lowest in Perquimans County.

**Table 108. 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
Perquimans County	78	15.4	27	16.0	51	11.5
<i>Regional Average</i>	138	16.7	59	19.5	89	12.6
Pamlico County	77	20.6	31	21.7	45	13.8
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 (51).

Table 109 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 in Perquimans County was second-highest among the comparators in every period cited.

**Table 109. 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.	%
Perquimans County	82	13.3	88	14.1	86	13.3	86	13.2	87	12.9
<i>Regional Average</i>	127	12.4	130	12.3	136	12.6	136	12.3	135	12.5
Pamlico County	141	26.0	142	25.3	151	26.9	149	26.4	141	25.5
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 110 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 Perquimans County who received early prenatal care averaged approximately 82% over the period cited, marginally lower than the state average for the period (83%) and lower than the regional average (85%).
- The percentage of pregnant black women in Perquimans County who received early prenatal care averaged approximately 71% over the period cited, lower than the comparable average for black women region-wide (78%) and statewide (75%).

**Table 110. 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
Perquimans County	81.4	66.5	0.0	82.1	78.0	70.0	82.1	68.6	0.0	82.5	72.8	0.0	82.3	70.2	0.0
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
Pamlico County	75.8	60.0	100.0	71.5	55.1	100.0	74.4	60.4	100.0	75.5	60.4	100.0	73.0	61.0	0.0
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 (52).

Table 111 presents five-year aggregate data on low birth weight births: infants weighing 2,500 grams (5.5 pounds) or less.

- The total percent of low birth-weight births and the percent of low birth-weight births among white non-Hispanics were second highest in Perquimans County in both periods cited. The percent of low birth-weight births among black non-Hispanics in Perquimans County was second-lowest in 2006-2010 but highest in 2007-2011.
- Most of the other 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 111. Low Birth-Weight Births
(Five Year Aggregate Periods, 2006-2010 and 2007-2011)**

Location	Percent of Low Birth Weight ($\leq 2,500$ 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
Perquimans County	9.5	8.1	13.7	0.0	5.0	9.6	7.7	14.7	0.0	12.5
<i>Regional Average</i>	10.3	7.7	14.8	7.3	7.7	9.9	7.5	14.1	6.2	9.3
Pamlico County	8.8	8.3	11.7	0.0	6.1	8.7	8.3	10.6	50.0	5.7
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 112 presents five-year aggregate data on very low birth-weight births: infants weighing 1,500 grams (3.3 pounds) or less.

- In both counties the percentages of very low birth-weight births among racially/ethnically-stratified groups were based on small numbers of events and thus were unstable. At the state level, black non-Hispanic women had the highest percentage of very low birth-weight births.

**Table 112. Very Low Birth-Weight Births
(Five-Year Aggregate Periods, 2006-2010 and 2007-2011)**

Location	Percent of Very Low Birth Weight ($\leq 1,500$ 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
Perquimans County	2.4	1.8	4.2	0.0	0.0	2.2	1.5	4.5	0.0	0.0
<i>Regional Average</i>	2.4	1.6	4.2	1.3	3.9	2.1	1.3	3.9	0.9	4.5
Pamlico County	1.8	0.7	6.8	0.0	0.0	1.7	1.0	5.3	0.0	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 113 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 1% in Perquimans County, 13% in the ARHS region, 5% in Pamlico County, and 13% statewide.

**Table 113. 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
Perquimans County	31.4	31.3	30.8	31.4	29.3	29.3	31.7
<i>Regional Average</i>	28.6	29.5	30.3	30.8	31.3	31.8	32.2
Pamlico County	27.5	28.3	28.1	28.9	28.8	30.5	28.9
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 Perquimans County infants upon birth. Table 114 summarizes some of that data for 2012. There were no births reported for Vidant Bertie Hospital.

- Of 121 hospitalizations associated with infants born to Perquimans County resident mothers in 2012, 103 (85%) involved “normal” infants. An additional three births (2%) involved infants that presented with “major” problems, and 15 (12%) involved infants that presented with “significant” problems.

**Table 114. Discharges of Newborn Infants, Perquimans County Resident Mothers
(2012)**

DRG Code	Diagnosis	Number of Discharges, by Hospital		
		Vidant Chowan Hospital	Vidant Roanoke-Chowan Hospital	Albemarle Hospital
795	Normal newborn	34	0	69
793	Full-term neonate with major problems	1	0	2
794	Neonate with other significant problems	0	0	15

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 115 presents infant mortality data for Perquimans County, the ARHS region, Pamlico County and the state of NC.

- Due to infant deaths numbering fewer than 20 per aggregate period in Perquimans County and the other local jurisdictions, stable rates are not available for comparison.
- At the state level, the infant mortality rate decreased 8% overall between 2001-2005 and 2007-2011.

**Table 115. 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
Perquimans County	10	16.2	10	16	9	13.9	9	13.8	9	13.4	10	15.1	10	14.8
<i>Regional Average</i>	10	9.4	10	9.2	11	10.1	13	11.3	14	11.8	13	11.9	13	11.4
Pamlico County	4	7.4	4	7.1	3	5.3	3	5.3	3	5.4	5	9.2	5	9.7
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 116 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 was 2½ times the comparable rate for White non-Hispanics.

**Table 116. 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
Perquimans County Total	10	15.1	10	14.8
White, Non-Hispanic	5	11.2	5	10.8
African American, Non-Hispanic	4	21.1	4	22.6
Other, Non-Hispanic	0	0	0	0
Hispanic	1	50	1	41.7
<i>Regional Average Total</i>	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
Pamlico County Total	5	9.2	5	9.7
White, Non-Hispanic	3	7.3	3	7.8
African American, Non-Hispanic	2	19.4	2	21.3
Other, Non-Hispanic	0	0	0	0
Hispanic	0	0	0	0
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 117 presents gender- and race-stratified life expectancy at birth data for all jurisdictions.

- Overall life expectancy at birth in Perquimans County increased by three years, from 74.6 to 77.6 (4.0%), between 1990-1992 and 2008-2010.
- In both periods cited average life expectancies at birth for females in Perquimans County were higher than life expectancies for males, but the gap narrowed from 10.4 years to 7.3 years because life expectancy increased by 4.1 years for males and only 1.0 years for females.
- In Perquimans County in 1990-1992 the life expectancy for whites exceeded the life expectancy for African-Americans by 0.5 years. By 2008-2010 the life expectancy for African Americans had *decreased* by 1.5 years and the life expectancy gap had increased to 6.4 years.

**Table 117. 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
Perquimans County	74.6	69.8	80.2	74.8	74.3	77.6	73.9	81.2	79.2	72.8
<i>Regional Average</i>	73.7	69.8	77.7	75.1	70.3	77.1	73.7	80.5	78.1	74.9
Pamlico County	75.1	71.5	78.7	76.7	70.7	77.3	73.7	81.2	77.8	74.6
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 118 compares mortality rates for the 15 leading causes of death in Perquimans County, the ARHS region, Pamlico 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 Perquimans County. Note that the NC SCHS suppressed rates for some causes of death (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 Perquimans County and NC mortality rates are discussed below.

Relative to the **state of NC**:

- The overall mortality rate in Perquimans County (741.1) was 8% *lower* than the overall state mortality rate (808.4).
- The first two leading causes of death were *reversed*: first in Perquimans County but second in NC: diseases of the heart; second in Perquimans County but first in NC: total cancer. The heart disease mortality rate in Perquimans County (196.8) was 10% *higher* than the state rate (179.3), and the total cancer mortality rate in Perquimans County (188.1) was 5% *higher* than the state rate (179.7).
- Cerebrovascular disease ranked *higher* among leading causes of death in Perquimans County (3rd vs. 4th). The mortality rate for cerebrovascular disease in Perquimans County was 38.0, 17% *lower* than the comparable state rate of 46.0.
- Alzheimer's disease ranked *higher* among leading causes of death in Perquimans County (4th vs. 6th). The mortality rate for Alzheimer's disease in Perquimans County was 26.6, 8% *lower* than the comparable state rate of 29.0.
- Chronic lower respiratory disease ranked lower among leading causes of death in Perquimans County (5th vs. 3rd). The mortality rate for chronic lower respiratory disease in Perquimans County was 25.3, 46% *lower* than the comparable state rate of 46.6.

Due to below-threshold numbers of deaths in the remaining ten categories of mortality in Perquimans County, NC SCHS suppressed the associated rates.

Table 118. Overall Age-Adjusted Mortality Rates for the 15 Leading Causes of Death, Perquimans County and Comparators (Single Five-Year Aggregate Period, 2007-2011 or as Noted)¹

Cause of Death	Perquimans County			Regional Average			Pamlico 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	194	196.8	1	220	188.9	2	159	163.3	2	86,099	179.3	2	173.7	1
Total Cancer	182	188.1	2	228	195.3	1	175	174.4	1	88,518	179.7	1	168.6	2
Cerebrovascular Disease	38	38.0	3	51	43.7	4	53	54.7	3	21,774	46.0	4	37.9	5
Alzheimer's Disease	27	26.6	4	30	26.9	8	27	29.0	7	13,347	29.0	6	24.6	6
Chronic Lower Respiratory Disease	25	25.3	5	51	46.1	3	43	41.4	4	22,274	46.6	3	42.7	3
All Other Unintentional Injuries	18	N/A	N/A	31	31.2	6	28	32.9	5	13,781	29.2	5	38.0	4
Nephritis, Nephrotic Syndrome, and Nephrosis	16	N/A	N/A	19	19.8	9	17	N/A	N/A	8,860	18.6	8	13.4	9
Diabetes Mellitus	15	N/A	N/A	31	37.8	5	15	N/A	N/A	10,733	22.0	7	21.5	7
Pneumonia and Influenza	15	N/A	N/A	30	14.0	11	14	N/A	N/A	8,455	17.9	9	15.7	8
Septicemia	11	N/A	N/A	14	9.7	12	16	N/A	N/A	6,515	13.6	11	10.5	12
Chronic Liver Disease and Cirrhosis	7	N/A	N/A	11	N/A	N/A	12	N/A	N/A	4,723	9.3	13	9.7	13
Unintentional Motor Vehicle Injuries	6	N/A	N/A	20	27.9	7	21	31.4	6	7,336	15.5	10	10.9	11
Suicide	5	N/A	N/A	10	17.4	10	18	N/A	N/A	5,751	12.1	12	12.0	10
Homicide	2	N/A	N/A	4	N/A	N/A	3	N/A	N/A	2,949	6.3	14	3.6	14
Acquired Immune Deficiency Syndrome	1	N/A	N/A	4	N/A	N/A	1	N/A	N/A	1,687	3.5	15	2.4	15
Total Deaths All Causes (Some causes are not listed above)	698	741.1	N/A	949	840.1	N/A	734	796.1	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 Perquimans County were *lower* for every cause of death with a rate listed except:

- Diseases of the heart

The overall mortality rate in Perquimans County (741.1) was 12% *lower* than the average overall regional rate (840.1).

Compared to US mortality rates, mortality rates in Perquimans County were *higher* for every cause of death with comparable rates listed except:

- Chronic lower respiratory disease

The overall mortality rate in Perquimans County was nearly identical to 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 119 compares gender stratified rates for the 15 leading causes of death in Perquimans County and its comparator jurisdictions. The usefulness of the table is hampered somewhat by numerous suppressed gender-stratified mortality rates.

In Perquimans County, mortality *rates for males were higher* than comparable rates for females for:

- Diseases of the heart (by 105%), and
- Total cancer (by 49%)

While gender-stratified mortality rates for Perquimans County were suppressed for the remaining causes of death, the *number* of deaths among males *significantly* surpassed (i.e., by more than three) the *number* of deaths among females for:

- Chronic lower respiratory disease,
- All other unintentional injuries,
- Chronic liver disease and cirrhosis, and
- Unintentional motor vehicle injuries

The number of deaths among females *significantly* surpassed the number of deaths among males for:

- Cerebrovascular disease, and
- Alzheimer's disease

There was *non-significant* difference in the number of deaths (i.e. three or fewer) among males and females for:

- Nephritis, nephrotic syndrome and nephrosis,

- Diabetes mellitus,
- Pneumonia and influenza,
- Septicemia,
- Suicide,
- Homicide, and
- AIDS

In Perquimans County, the overall mortality rate for males (920.5) was 57% higher than the overall mortality rate for females (586.4).

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 119. Sex-Specific Age-Adjusted Death Rates for the 15 Leading Causes of Death (Single Five-Year Aggregate Period, 2007-2011)

Cause of Death	Perquimans County				Pamlico County		Regional Average Rate		State of NC Rate	
	Males		Females		Males	Females	Males	Females	Males	Females
	Number	Rate	Number	Rate						
1. Diseases of the Heart	114	272.3	80	132.9	198.9	131.3	256.2	136.6	229.4	141.6
2. Cancer	102	232.7	80	155.9	221.9	132.1	245.5	161.1	227.4	147.5
3. Cerebrovascular Diseases	16	N/A	22	35.9	46.9	59.8	64.2	40.5	46.8	44.5
4. Alzheimer’s Disease	7	N/A	20	30.0	N/A	40.4	N/A	N/A	22.7	32.2
5. Chronic Lower Respiratory Disease	17	N/A	8	N/A	38.3	40.3	73.4	35.4	54.9	41.7
6. Unintentional Non-Motor Vehicle Injury	11	N/A	7	N/A	N/A	N/A	46.7	19.8	38.8	20.9
7. Nephritis, Nephrotic Syndrome and Nephrosis	7	N/A	9	N/A	N/A	N/A	N/A	N/A	22.7	16.0
8. Diabetes Mellitus	9	N/A	6	N/A	N/A	N/A	61.1	36.0	26.0	18.8
9. Pneumonia and Influenza	9	N/A	6	N/A	N/A	N/A	56.7	47.9	20.9	16.1
10. Septicemia	5	N/A	6	N/A	N/A	N/A	N/A	N/A	15.0	12.6
11. Chronic Liver Disease and Cirrhosis	7	N/A	0	N/A	N/A	N/A	N/A	N/A	13.2	5.9
12. Unintentional Motor Vehicle Injuries	5	N/A	1	N/A	N/A	N/A	54.2	N/A	22.9	8.6
13. Suicide	4	N/A	1	N/A	N/A	N/A	N/A	N/A	19.6	5.3
14. Homicide	2	N/A	0	N/A	N/A	N/A	N/A	N/A	9.8	2.9
15. Acquired Immune Deficiency Syndrome	1	N/A	0	N/A	N/A	N/A	N/A	N/A	4.8	2.3
Total Deaths All Causes (Some causes are not listed above)	379	920.5	319	586.4	910.7	686.6	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 Perquimans County are available only for white and African American non-Hispanics, and for only some causes of death.

According to data in Table 120, in Perquimans County the overall mortality rate for African American non-Hispanics (954.9) was 40% higher than the overall mortality rate for white non-Hispanics (681.1). Racial differences in mortality will be described in detail as each cause of death is discussed separately in subsequent sections of this report.

Table 120. Race-Specific Age-Adjusted Death Rates for the 15 Leading Causes of Death (Single Five-Year Aggregate Period, 2007-2011)

Cause of Death	Perquimans 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	140	181.1	53	252.3	0	N/A	1	N/A	194	196.8
2. Cancer	138	185.8	44	209.4	0	N/A	0	N/A	182	188.1
3. Cerebrovascular Diseases	27	33.9	10	N/A	1	N/A	0	N/A	38	38.0
4. Alzheimer's Disease	20	25.7	7	N/A	0	N/A	0	N/A	27	26.6
5. Chronic Lower Respiratory Disease	21	27.9	4	N/A	0	N/A	0	N/A	25	25.3
6. Unintentional Non-Motor Vehicle Injury	16	N/A	2	N/A	0	N/A	0	N/A	18	N/A
7. Nephritis, Nephrotic Syndrome and Nephrosis	8	N/A	8	N/A	0	N/A	0	N/A	16	N/A
8. Diabetes Mellitus	10	N/A	5	N/A	0	N/A	0	N/A	15	N/A
9. Pneumonia and Influenza	11	N/A	4	N/A	0	N/A	0	N/A	15	N/A
10. Septicemia	8	N/A	3	N/A	0	N/A	0	N/A	11	N/A
11. Chronic Liver Disease and Cirrhosis	5	N/A	2	N/A	0	N/A	0	N/A	7	N/A
12. Unintentional Motor Vehicle Injuries	2	N/A	4	N/A	0	N/A	0	N/A	6	N/A
13. Suicide	5	N/A	0	N/A	0	N/A	0	N/A	5	N/A
14. Homicide	0	N/A	2	N/A	0	N/A	0	N/A	2	N/A
15. Acquired Immune Deficiency Syndrome	0	N/A	1	N/A	0	N/A	0	N/A	1	N/A
Total Deaths All Causes (Some causes are not listed above)	500	681.1	194	954.9	2	N/A	2	N/A	698	741.1

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-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 121 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 Perquimans County were:

- Age Group 00-19: Conditions originating in the perinatal period
- Age Group 20-39: All other unintentional injuries (i.e., non-motor vehicle injuries)
- 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:

- Cerebrovascular disease was a more prominent cause of death in the 40-64 age group in Perquimans County than in the other jurisdictions.
- Alzheimer's disease was a more prominent cause of death among the 85+ age group in Perquimans County and Pamlico County than in the state as a whole.

Table 121. 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		
		Perquimans	Pamlico 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	<i>Cancer-all sites</i> <i>Congenital anomalies</i> <i>Suicide</i> <i>Other unintentional injuries</i>	<i>Suicide</i>	Congenital anomalies (birth defects)
	3	<i>Septicemia</i> <i>Diabetes mellitus</i>	<i>Acute bronchitis & bronchiolitis</i> <i>Congenital anomalies (birth defects)</i> <i>Other unintentional injuries</i>	Motor vehicle injuries
20-39	1	Other unintentional injuries	Motor vehicle injuries <i>Suicide</i>	Motor vehicle injuries
	2	<i>Cancer-all sites</i> <i>Diseases of the heart</i> <i>Motor vehicle injuries</i> <i>Homicide</i>	<i>Diseases of the heart</i> <i>Other unintentional injuries</i>	Other unintentional injuries
	3	<i>Septicemia</i> <i>Diabetes mellitus</i>	<i>Cancer-all sites</i> <i>Homicide</i>	Suicide
40-64	1	<i>Cancer-all sites</i>	<i>Cancer-all sites</i>	<i>Cancer-all sites</i>
	2	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>
	3	<i>Cerebrovascular disease</i>	<i>Motor vehicle injuries</i> <i>Other unintentional injuries</i>	<i>Other unintentional injuries</i>
65-84	1	<i>Cancer-all sites</i>	<i>Cancer-all sites</i>	<i>Cancer-all sites</i>
	2	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>
	3	<i>Chronic lower respiratory diseases</i>	<i>Chronic lower respiratory diseases</i>	<i>Chronic lower respiratory diseases</i>
85+	1	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>	<i>Diseases of the heart</i>
	2	<i>Cancer-all sites</i>	<i>Alzheimer's disease</i>	<i>Cancer-all sites</i>
	3	<i>Alzheimer's disease</i>	<i>Cerebrovascular disease</i>	<i>Cerebrovascular disease</i>

Note: Causes for which there were fewer than three (3) deaths in the five-year aggregate period cited are noted in italic type.
 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 to lowest rank in Perquimans County, beginning with heart disease. 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 (53).

Heart disease was the leading cause of death in Perquimans County, and the second leading cause of death in the Albemarle Region, Pamlico County and the state of NC in the 2007-2011 period (cited previously).

Heart Disease Hospitalizations

Table 122 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 among Perquimans County residents, a rate higher than the comparable state and regional averages.

**Table 122. Heart Disease Hospital Discharge Rate Trend
(2005-2011)**

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	15.2	14.5	12.7	14.3	12.8	12.0	12.0
<i>Regional Average</i>	11.4	11.9	11.1	10.6	9.7	9.7	9.9
Pamlico County	16.5	16.3	15.6	16.2	14.1	15.5	12.4
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 162 hospital admissions for heart disease among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

Table 123 presents data on 2012 inpatient hospitalizations of Perquimans County residents at the ARHS region's four hospitals for diagnoses 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 152 inpatient hospitalizations of Perquimans County residents for these categories of heart disease among the four ARHS region hospitals in 2012.

Table 123. Inpatient Hospitalizations of Perquimans 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	5
410-414	Ischemic heart disease	0	2	0	43
415-416	Pulmonary heart disease	0	3	0	9
420-429	Other forms of heart disease	0	22	0	68
TOTAL		0	27	0	125

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

Table 124 presents data on the number of emergency department (ED) admissions of Perquimans 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. Perquimans County residents made an average of 97 ED visits for these categories of heart disease in each of the three years cited.

Table 124. Emergency Department Admissions of Perquimans 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	32	23	29
415-416	Pulmonary heart disease	3	4	2
420-429	Other forms of heart disease	56	65	76
TOTAL		91	92	107

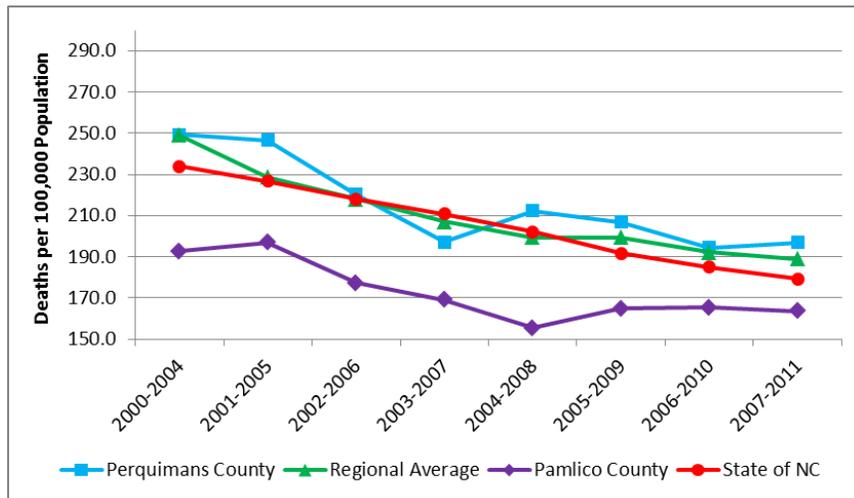
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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.
- The largest decrease over the period cited—24%—occurred in the ARHS region.
- The heart disease mortality rate for Perquimans County fell by 21% (from 249.4 to 196.8) between 2000-2004 and 2007-2011.
- At the state level, the heart disease mortality rate fell 23% 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 125 presents heart disease mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Among white non-Hispanic persons, the heart disease mortality rate was lowest in Pamlico County and highest region-wide.
- Note that due to below-threshold numbers of heart disease deaths among some minority populations in Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- 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 125. 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
Perquimans County	140	181.1	53	252.3	0	N/A	1	N/A	114	272.3	80	132.9	194	196.8
Regional Average	148	185.4	71	222.3	1	N/A	0	N/A	122	256.2	97	136.6	220	188.9
Pamlico County	118	152.8	41	212.5	0	N/A	0	N/A	86	198.9	73	131.3	159	163.6
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

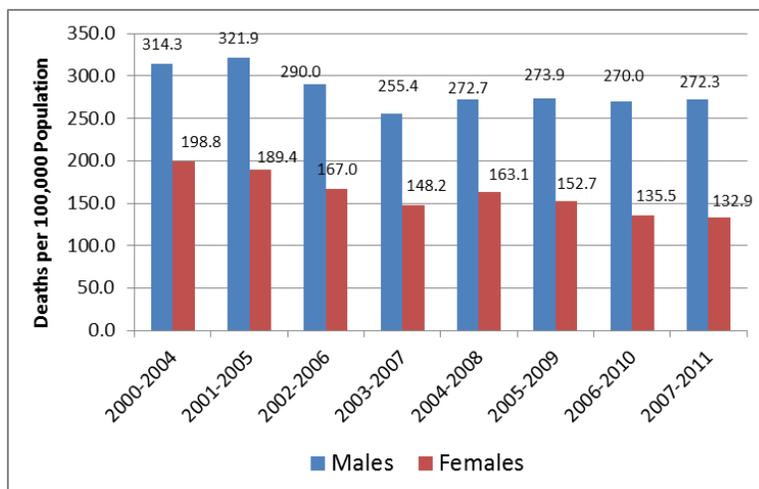
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that the gender difference in heart disease mortality noted in Perquimans 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.

Figure 8. Sex-Specific Heart Disease Mortality Rate Trend, Perquimans 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 126 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 populations the NC SCHS suppressed the related mortality rates.
- In Perquimans County the heart disease mortality rate among African American, non-Hispanic males was 35% *higher* than the rate among white non-Hispanic males, and the heart disease mortality rate among African American non-Hispanic females was 84% *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 126. 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
Perquimans County	255.4	343.9	N/A	N/A	113.4	208.4	N/A	N/A
<i>Regional Average</i>	252.0	296.3	N/A	N/A	136.5	178.0	N/A	N/A
Pamlico County	173.7	367.7	N/A	N/A	126.8	N/A	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 (55).

Total Cancer

Total cancer (cancers of all types) was the second-leading cause of death in Perquimans County and the leading cause of death in the ARHS region, Pamlico County and the state of NC in the 2007-2011 period (cited previously).

Malignant Neoplasm Hospitalizations

Table 127 presents the hospital discharge rate trend data for malignant neoplasms.

- The malignant neoplasm discharge rate in Perquimans County was higher than the comparable rates region-wide in every year cited, and higher than (or equal to) the comparable rate for the state as a whole in every year except 2011. Statewide, hospitalizations for this diagnosis decreased over time; there was no clear pattern in Perquimans County.

Table 127. All Malignant Neoplasms Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	4.8	4.3	5.3	3.7	3.8	3.3	2.7
<i>Regional Average</i>	3.6	3.4	3.5	2.9	2.9	2.4	2.4
Pamlico County	6.2	5.3	5.5	6.0	5.2	3.6	3.8
State of NC	3.9	3.9	3.9	3.6	3.4	3.3	3.2

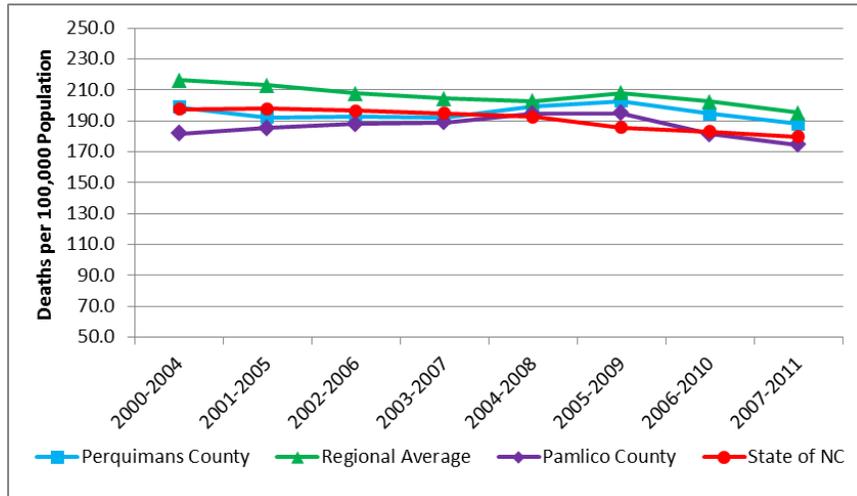
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Total Cancer Mortality Rate Trend

Figure 9 displays total cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- The total cancer mortality rate in Perquimans County did not change much during the period from 2006-2010 to 2007-2011 ranging between a high of 202.9 for 2005-2009 and a low of 188.1 for 2007-2001.
- Throughout the time period cited the total cancer mortality rate in Perquimans County exceeded the comparable rate for Pamlico County but was lower than the rate for the region.
- In every jurisdiction being compared the total cancer mortality rate in 2007-2011 was lower than the rate in 2000-2004.
- 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 128 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 Perquimans 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 Perquimans County the total cancer mortality rate among African American non-Hispanics was 17% higher than the rate for white non-Hispanics. 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 128. 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
Chowan County	160	206.7	75	242.5	0	N/A	0	N/A	128	279.7	107	170.8	235	215.2
Regional Average	152	188.4	75	229.4	0	N/A	1	N/A	121	245.5	107	161.1	228	195.3
Greene County	128	190.9	78	217.9	0	N/A	1	N/A	110	267.8	97	159.8	207	195.8
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

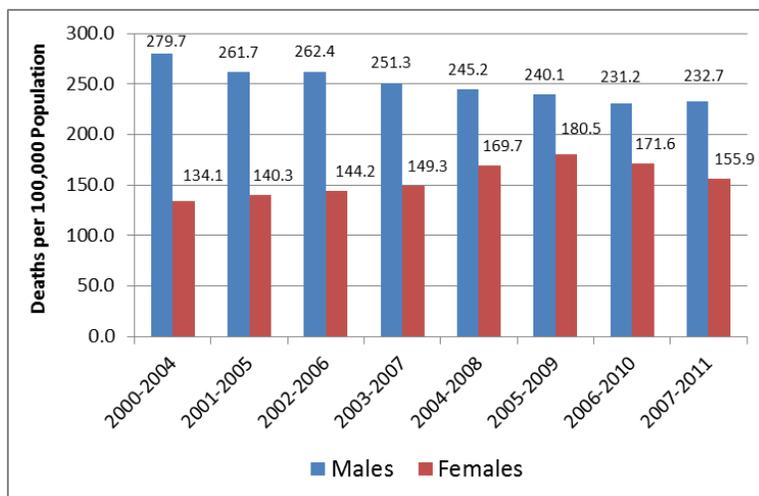
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that the gender difference in total cancer mortality noted in Perquimans County for 2007-2011 is actually longstanding.
- The total cancer mortality rate for males decreased steadily over most of the period cited while the comparable rate for females appeared to increase, at least until recently.

Figure 10. Sex-Specific Total Cancer Mortality Rate Trend, Perquimans 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 129 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 Perquimans County, the ARHS region and Pamlico County 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 (where available) exceeded the rates for white non-Hispanic females.
- At the state level, total cancer mortality rates among African American non-Hispanics, both male and female, were higher than comparable rates among their white, non-Hispanic counterparts. Total cancer mortality rates were lowest statewide among both male and female Hispanics.

**Table 129. 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
Perquimans County	212.1	339.5	N/A	N/A	168.9	N/A	N/A	N/A
<i>Regional Average</i>	228.1	307.0	N/A	N/A	160.0	181.0	N/A	N/A
Pamlico County	223.6	230.1	N/A	N/A	127.0	N/A	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/>.

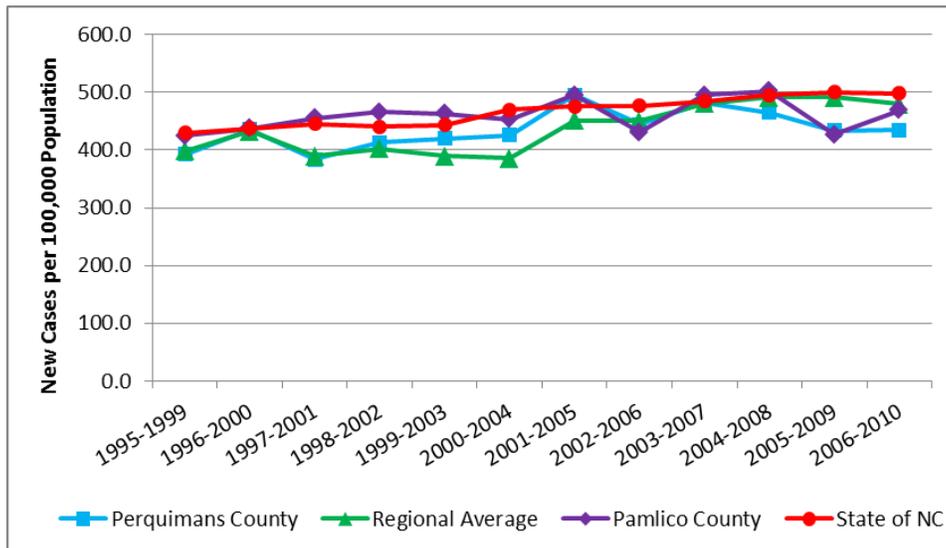
Total Cancer Incidence

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 Perquimans County fluctuated over time, but increased 11% in net over the entire period cited, from 392.7 in 1995-1999 to 434.7 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 Pamlico County increased 10% from 424.5 in 1995-1999 to 468.7 in 2006-2010.
- 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 Perquimans 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 130 presents age-adjusted *mortality* data for the five major site-specific cancers for the 2007-2011 period.

- In Perquimans County, lung cancer was the only site-specific cancer with a stable mortality rate. The numbers of other cancer deaths were below threshold so the mortality rates were suppressed.
- In NC as a whole, lung cancer presents the highest mortality rate, followed by prostate cancer, breast cancer, colon cancer, and pancreas cancer.

**Table 130. 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
Chowan County	15	N/A	13	N/A	75	67.1	16	N/A	15	N/A
Regional Average	14	27.2	13	34.1	72	64.0	21	19.4	13	10.4
Greene County	9	N/A	13	N/A	70	66.3	19	N/A	9	N/A
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 131 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 Perquimans County and Pamlico County prostate cancer was the site-specific cancer with the highest incidence rate, followed by breast cancer, lung cancer, and colon cancer.
- Region-wide and statewide, breast cancer presented with the highest incidence rate, followed by prostate cancer, lung cancer, and colon cancer.

**Table 131. 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
Chowan County	72	142.4	71	148.4	82	76.4	62	58.4
<i>Regional Average</i>	95	167.3	85	159.7	82	70.6	55	48.2
Greene County	83	155.9	93	191.7	101	96.0	45	42.3
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

Table 132 summarizes hospital discharge rate data for trachea, bronchus and lung neoplasms.

- The hospital discharge rate for lung cancer in Perquimans County rose overall between 2005 and 2011; the comparable state rate fell 33% over the same period.

**Table 132. 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
Perquimans County	0.4	0.4	1.5	0.8	0.8	1.0	0.6
<i>Regional Average</i>	0.5	0.5	0.7	0.5	0.4	0.5	0.4
Pamlico County	0.4	0.6	1.5	0.7	1.2	0.5	0.7
State of NC	0.6	0.6	0.6	0.5	0.5	0.5	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, eight Perquimans County residents were hospitalized somewhere in NC for diagnoses of malignant neoplasms of the trachea, bronchus and lung in 2011 (54).

Inpatient hospitalizations of Perquimans 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 133. In 2012 there were seven admissions in that code category among the four regional hospitals.

Table 133. Inpatient Hospitalizations of Perquimans 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	1	0	6

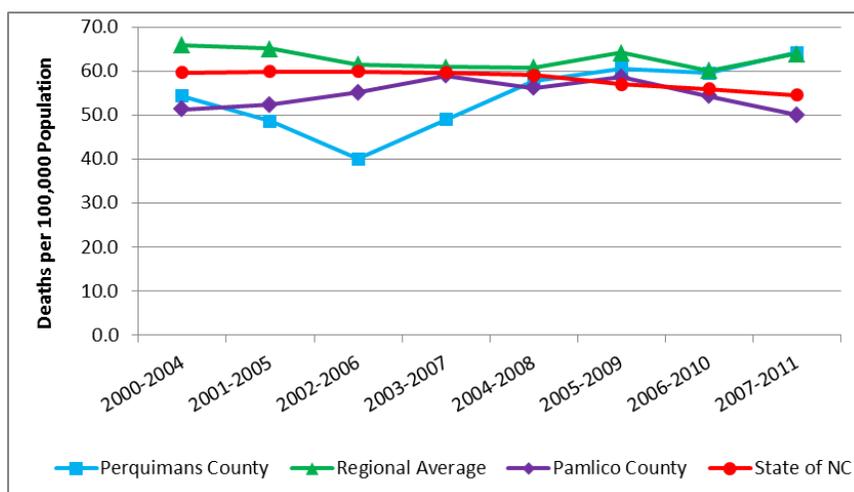
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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 Perquimans County fell early in the period cited, but then rose steadily from 40.0 in 2002-2006 to 64.1 in 2007-2011, an increase of 60%. Over that period the lung cancer mortality rate in Perquimans County rose from the lowest to the highest rate among the jurisdictions being compared.
- The lung cancer mortality rate in the region decreased 3% and the rate in NC decreased 9% over the entire 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 134 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 Perquimans County and elsewhere, mortality rates for those groups were suppressed.
- Among white non-Hispanic persons, the lung cancer mortality rate was lowest in Pamlico County; the regional average was the highest rate in this population group.
- Statewide, the lung cancer mortality rate for African American non-Hispanics was 3% *lower* than the comparable rate for white non-Hispanics.
- There appeared to be a gender difference in lung cancer mortality in Perquimans County, the ARHS region, and NC as a whole.

Table 134. Race/Ethnicity-Specific and Sex-Specific Lung Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

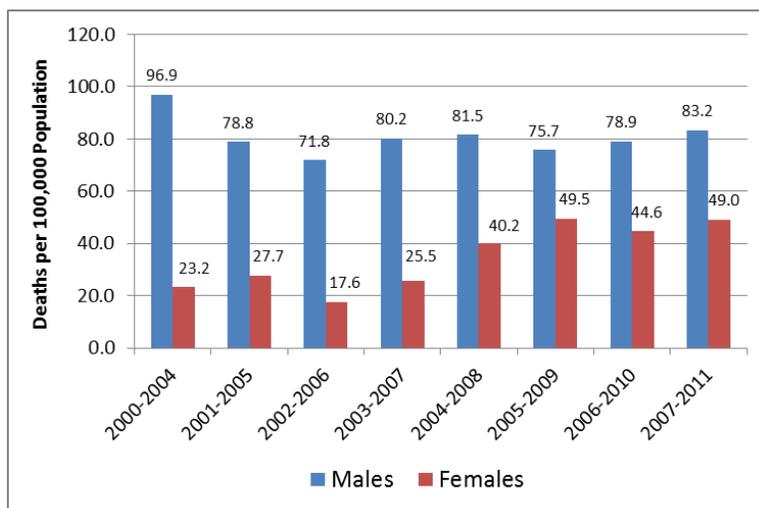
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	52	66.5	12	N/A	0	N/A	0	N/A	38	83.2	26	49.0	64	64.1
Regional Average	54	68.7	18	53.0	0	N/A	0	N/A	44	89.5	29	51.0	72	64.0
Pamlico County	44	53.4	8	N/A	0	N/A	0	N/A	36	72.6	16	N/A	52	50.0
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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- The lung cancer mortality rate among Perquimans County males fell over the period cited, from 96.9 in 2000-2004 to 83.2 in 2007-2011, a 14% decrease.
- Meanwhile, the lung cancer mortality rate among Perquimans County females rose 111% overall from 23.2 in 2000-2004 to 49.0 in 2007-2011.
- In 2000-2004, the lung cancer mortality rate for Perquimans County males was 318% higher than the comparable rate for Perquimans County females; by 2007-2011 the difference—still significant—had decreased to 70%.

**Figure 13. Sex-Specific Lung Cancer Mortality Rate Trend, Perquimans County
(Five-Year Aggregate Periods, 2000-2004 through 2007-2011)**



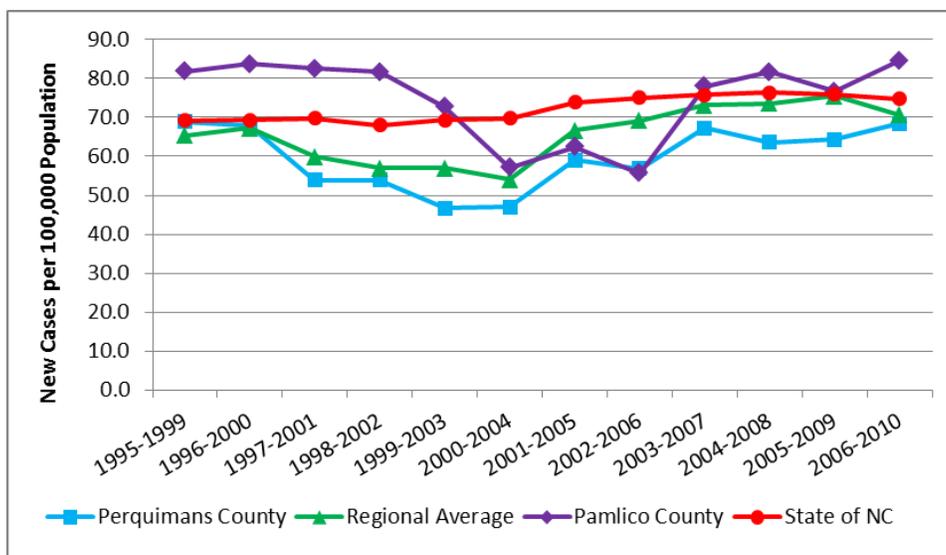
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2006-2013), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County;
<http://www.schs.state.nc.us/SCHS/data/databook/>.

Lung Cancer Incidence

Figure 14 plots the incidence rate trend for lung cancer.

- Lung cancer incidence rates were quite variable in the counties, but throughout the period cited increased at least slightly overall in every jurisdiction.

**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

Table 135 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 135. 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
Perquimans County	0.9	0.1	0.2	0.2	0.2	0.2	0.1
<i>Regional Average</i>	0.3	0.2	0.3	0.2	0.2	0.2	0.3
Pamlico County	0.3	0.4	0.3	0.7	0.5	0.5	0.3
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 two hospitalizations of Perquimans County residents somewhere in NC for treatment of malignant neoplasms of the prostate (54).

Inpatient hospitalizations of Perquimans 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 136. In 2012 there were two inpatient hospitalizations in that code category among the four regional hospitals.

Table 136. Inpatient Hospitalizations of Perquimans County Residents for Neoplasms of the Prostate, ARHS Region Hospitals (2012)

ICD-9 Code	Number of Inpatient Hospitalizations			
	VBER	VCHO	VROA	AH
185	0	1	0	1

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

Table 137 presents data on outpatient/day surgery procedures of the prostate performed among Perquimans County residents at the region's four hospitals in 2010-2012. The ICD-9 Procedure Code 60 (Operations on Prostate and Seminal Vesicles), which would include biopsy of the prostate, was used to conduct the data search. Note that this data is not necessarily specific to a diagnosis of prostate cancer. There was a total of 17 procedures in that procedure code category conducted on Perquimans County residents at the four region hospitals in the period 2010-2012.

Table 137. Outpatient Operations on the Prostate and Seminal Vesicles, Perquimans County Residents, ARHS Region Hospitals (2010-2012)

Year	ICD-9 Procedure Code 60 Operations			
	VBER	VCHO	VROA	AH
2010	0	3	0	4
2011	0	4	0	6
2012	0	0	0	0

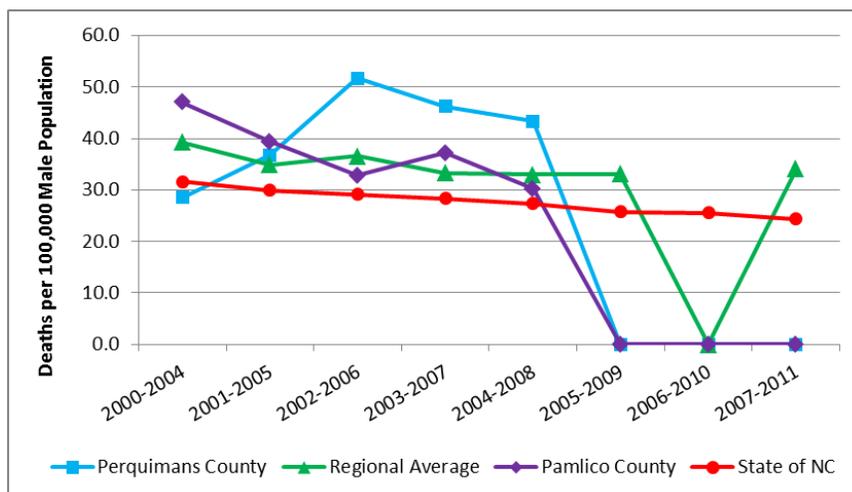
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Prostate Cancer Mortality Rate Trend

Figure 15 displays prostate cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- The erratic nature of the plot of the Perquimans County and Pamlico County prostate cancer mortality rates is a reflection of the instability in the rates. None of the county rates were stable, and the “zero” plots represent suppressed rates, and not a true value of zero.
- Region-wide, the “zero” plot for 2006-2010 represents a suppressed rate. However, all the rates should be considered unstable since the mean 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 138 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 138. 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		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	2	N/A	3	N/A	0	N/A	0	N/A	5	N/A
Regional Average	6	N/A	6	N/A	0	N/A	0	N/A	13	34
Pamlico County	7	N/A	2	N/A	1	N/A	0	N/A	10	N/A
State of NC	2,882	19.6	1,416	55.6	51	17.3	36	12.0	4,385	24.3

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.

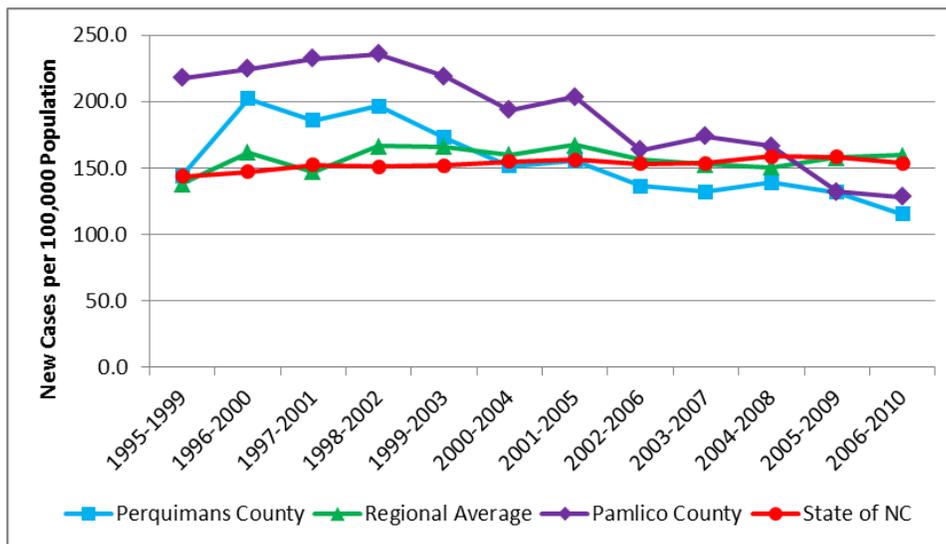
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Prostate Cancer Incidence

Figure 16 plots the incidence rate trend for prostate cancer.

- The prostate cancer incidence rates in Perquimans County fluctuated but decreased 43% over most of the period cited, from 202.1 in 1996-2000 to 115.2 in 2006-2010.
- The prostate cancer incidence rate for the region increased 16% over the period cited; the rate for the state rose 7% over the same period.
- As in Perquimans County, the prostate cancer incidence rate decrease in Pamlico County also was dramatic, falling 41% from 217.6 in 1995-1999 to 128.3 in 2006-2010.

**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 Perquimans County or Pamlico County in the 2007-2011 period; there were, however, 56 breast cancer deaths among males statewide.

Breast Cancer Hospitalizations

Table 139 summarizes hospital discharge rate data for breast cancer.

- 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 139. 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
Perquimans County	0.5	0.1	0.3	0.3	0.2	n/a	0.2
<i>Regional Average</i>	0.2	0.2	0.3	0.2	0.2	0.2	0.1
Pamlico County	0.5	0.2	n/a	0.2	0.3	n/a	0.1
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 three hospitalizations of Perquimans County residents somewhere in NC for treatment of malignant neoplasms of the female breast (54).

Inpatient hospitalizations of Perquimans 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 140. In 2012 there was one inpatient admission in that category among the four regional hospitals.

Table 140. Inpatient Hospitalizations of Perquimans 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	1

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

Table 141 presents data on outpatient/day surgery procedures of the breast performed among Perquimans County residents at the region's four hospitals in 2010-2012. The ICD-9 Procedure Code 85 (Operations on the Breast), which would include breast biopsy, was used to conduct the data search. There were 44 such procedures conducted among Perquimans County residents in the period cited.

Table 141. Outpatient Operations on the Breast, Perquimans County Residents, ARHS Region Hospitals (2010-2012)

Year	ICD-9 Procedure Code 85 Operations			
	VBER	VCHO	VROA	AH
2010	0	3	0	13
2011	0	2	0	11
2012	0	0	0	15

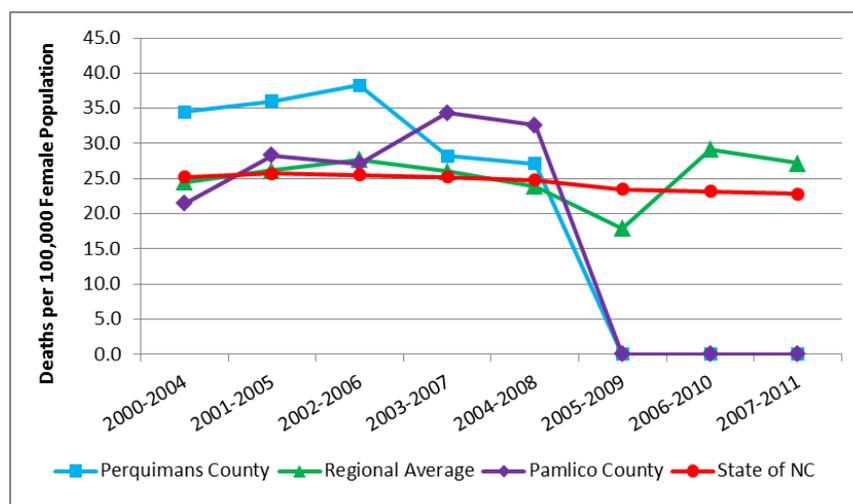
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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 rates in Perquimans County and Pamlico County were unstable or suppressed due to below-threshold numbers of deaths.
- 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 142 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 Perquimans 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 142. 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
Perquimans County	N/A	N/A	N/A	N/A
Regional Average	N/A	N/A	N/A	N/A
Pamlico 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.

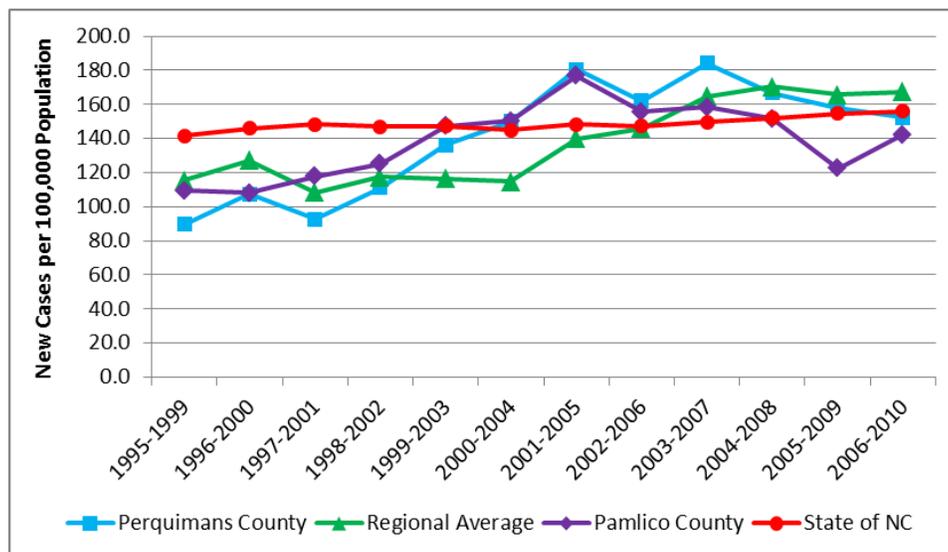
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

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 Perquimans County the overall increase was 70%, from 89.6 in 1995-1999 to 152.3 in 2006-2010. Comparable net increases were 30% in Pamlico 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

Table 143 summarizes hospital discharge rate data for malignant neoplasms of the colon, rectum and anus. Local discharge rates were mostly unstable. There was a small decrease in the colon cancer discharge rate at the state level.

Table 143. 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
Perquimans County	0.7	1.0	1.1	0.7	0.5	0.5	0.5
Regional Average	0.5	0.7	0.6	0.5	0.5	0.3	0.4
Pamlico County	0.4	0.6	0.5	0.6	0.4	0.4	0.5
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, seven Perquimans County residents were hospitalized somewhere in NC with diagnoses of malignant neoplasms of the colon, rectum and anus in 2011 (54).

Inpatient hospitalizations of Perquimans 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 144. In 2012 there were six inpatient admissions in those code categories among the four regional hospitals.

Table 144. Inpatient Hospitalizations of Perquimans 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	5
154	0	0	0	1

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 145 tracks outpatient/day surgery admissions in those categories for Perquimans County residents at the four regional hospitals. There were 567 total procedures in these categories among Perquimans County residents in the period from 2010-2012.

Table 145. Outpatient Procedures on Large Intestine, Perquimans 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	189
2011	0	0	0	194
2012	0	0	0	184

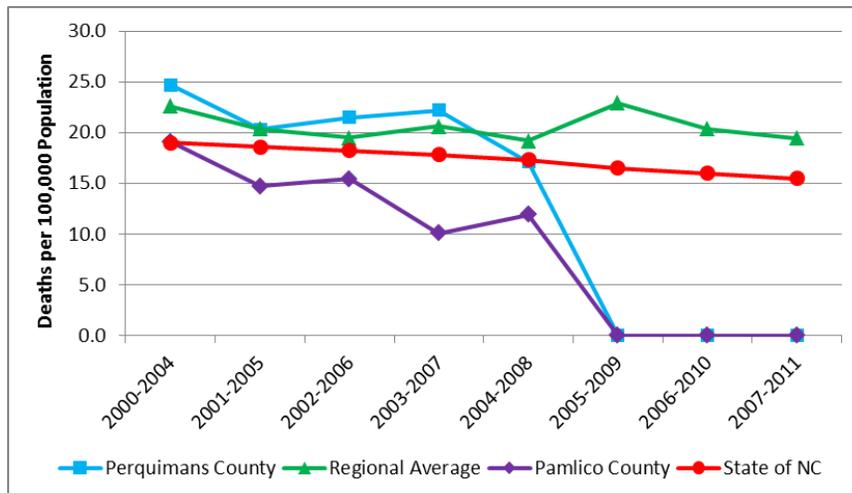
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Colon Cancer Mortality Rate Trend

Figure 19 displays colon cancer mortality rate trends over time for the four jurisdictions being compared in this CHA.

- All of the county colon cancer mortality rates were either unstable or suppressed (suppressed rates are indicated on the graph with a “zero” plot).
- Even the unstable county rates appeared to fall over the period for which there is data.
- 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.

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 146 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.
- At the state level the colon cancer mortality rate for males (19.0) was 47% higher than the comparable rate for females (12.9).

Table 146. Race/Ethnicity-Specific and Sex-Specific Colon Cancer Mortality (Single Five-Year Aggregate Period, 2007-2011)

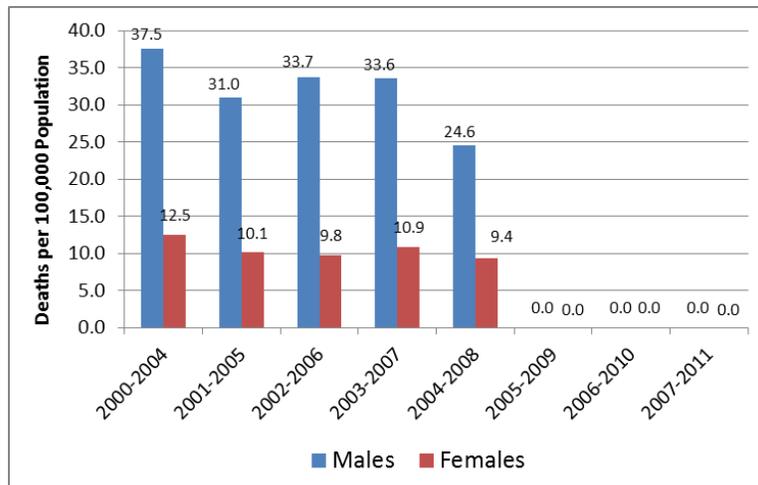
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	14	N/A	5	N/A	0	N/A	0	N/A	15	N/A	4	N/A	19	N/A
Regional Average	13	13.8	8	N/A	0	N/A	0	N/A	10	N/A	12	15.8	21	19.4
Pamlico County	8	N/A	1	N/A	0	N/A	0	N/A	3	N/A	6	N/A	9	N/A
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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- Although all the gender-stratified colon cancer mortality rates for the county were either unstable or suppressed, the degree of difference between the measured rates for men and women appears to be significant, with the rates for men higher than the rates for women. Note that “zero” signifies only that a rate was suppressed.

Figure 20. Sex-Specific Colon Cancer Mortality Rate Trend, Perquimans County (Five-Year Aggregate Periods, 2000-2004 through 2007-2011)



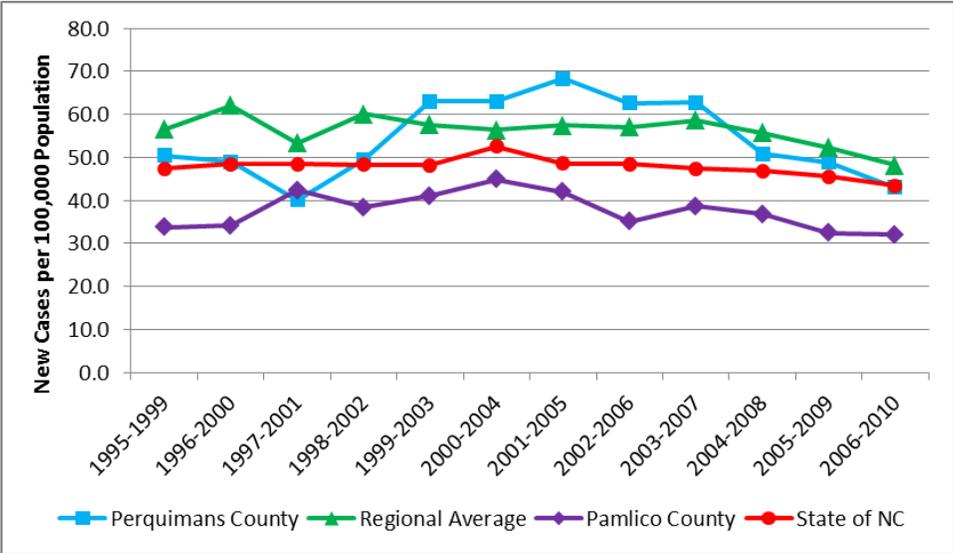
Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2006-2013), Mortality, NC Resident Race-Specific and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Colon Cancer Incidence

Figure 21 plots the incidence rate trend for colon cancer.

- The colon cancer incidence rate in Perquimans County fell over the period cited, but only after a period of significant increase and decrease. The county’s colon cancer incidence rate in 2006-2010 (43.0) was 15% lower than the rate in 1995-1999 (50.4).
- The regional colon cancer incidence rate, relatively steady for several aggregate periods, fell 15% overall, to a 10-year low of 48.2.
- The Pamlico County colon cancer incidence rate, relatively steady over most of the period cited, decreased by 5% overall between 1995-1999 and 2006-2010.
- 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

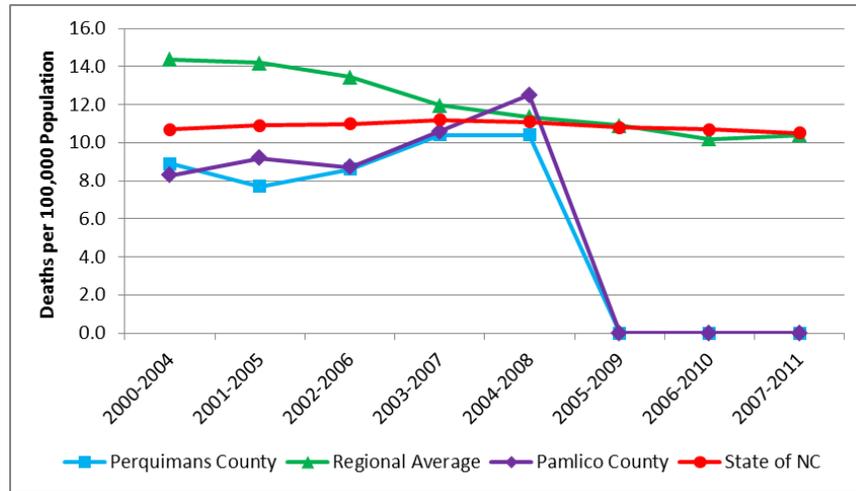
Figure 22 displays pancreas cancer mortality rate trends over time in the four jurisdictions being compared in this CHA.

- Although the Perquimans County and Pamlico County pancreas cancer mortality rates all were unstable or suppressed, the available data appeared to indicate a rising

mortality trend in both jurisdictions. Note that the “zero” plots for the last three aggregate periods represent suppressed rates, not true values of zero.

- 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.

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 147 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 in all stratified populations in Perquimans County and elsewhere, mortality rates for those groups were suppressed.
- 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 147. 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
Perquimans County	6	N/A	3	N/A	0	N/A	0	N/A	3	N/A	6	N/A	9	N/A
Regional Average	7	N/A	6	N/A	0	N/A	0	N/A	5	N/A	8	N/A	13	10
Pamlico County	8	N/A	4	N/A	0	N/A	0	N/A	5	N/A	7	N/A	12	N/A
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

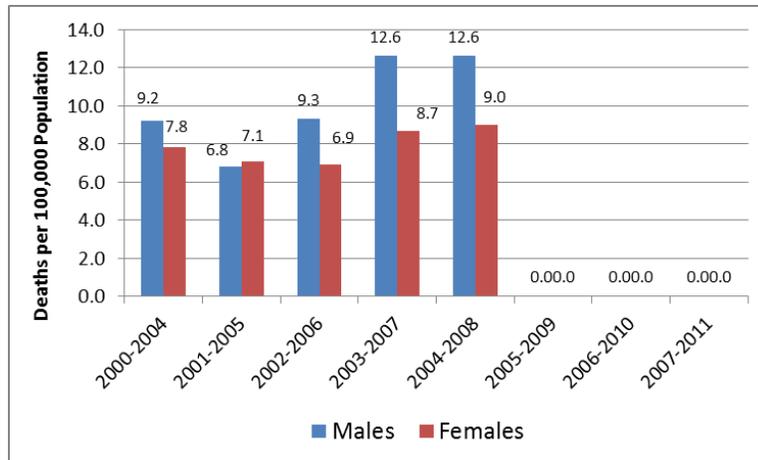
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- Since all the gender-stratified pancreas cancer mortality rates shown were either unstable or suppressed, they should be interpreted with caution, but it does appear that the pancreas cancer mortality rates for males and females were increasing and that in most periods the mortality rate for men was higher than the rate for women.

Figure 23. Sex-Specific Pancreas Cancer Mortality Rate Trend, Perquimans 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 (56).

In the 2007-2011 aggregate period cerebrovascular disease was the third leading cause of death in Perquimans County and Pamlico County, and the fourth leading cause of death in the Albemarle region and the state of NC (cited previously).

Cerebrovascular Disease Hospitalizations

Table 148 presents the hospital discharge rate trend data for cerebrovascular disease (CVD). According to this data, the highest rates of CVD hospitalization were in Pamlico County. The discharge rates in Perquimans County were higher than the comparable rates for the region throughout the period cited.

Table 148. Cerebrovascular Disease Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	4.0	3.9	3.1	2.8	2.9	3.4	2.7
<i>Regional Average</i>	3.1	3.0	2.8	2.5	2.4	2.8	2.2
Pamlico County	4.4	4.0	4.8	4.4	3.8	5.3	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 36 hospital admissions for CVD among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

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 149 presents data on 2012 hospitalizations of Perquimans County residents for diagnoses of cerebrovascular disease. There were 41 hospitalizations at the four ARHS hospitals for treatment of cerebrovascular disease among Perquimans County residents in 2012.

Table 149. Inpatient Hospitalizations of Perquimans 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	11	2	28

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

Table 150 presents data on the number of emergency department admissions of Perquimans 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 101 and an annual average of 37 ED visits to the region's four hospitals by Perquimans County residents for diagnoses of cerebrovascular disease.

Table 150. Emergency Department Admissions of Perquimans 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	28	37	36

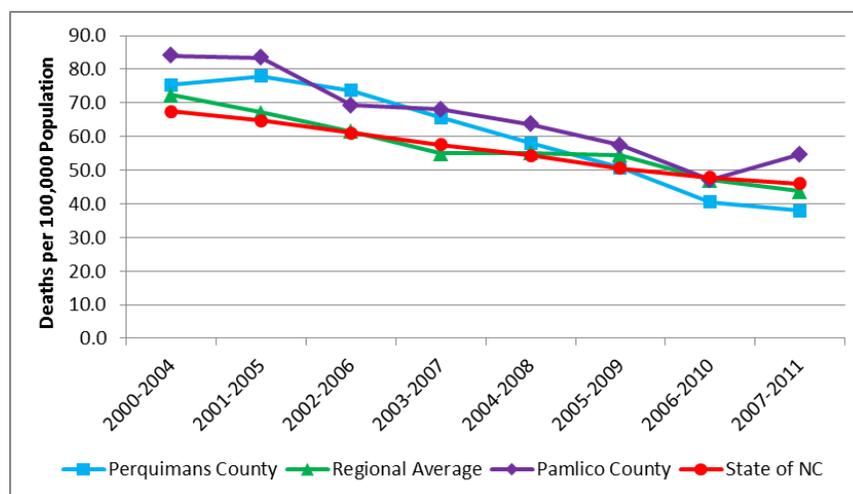
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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 CVD mortality rate in Perquimans County was higher than the comparable rates for the region and the state but lower than the rate for Pamlico County throughout most the interval cited.
- CVD mortality rates in every jurisdiction fell over the period cited. The overall decrease in Perquimans County was 50%, from 75.4 in 2000-2004 to 38.0 in 2007-2011. Comparable decreases were 35% in Pamlico County, 40% region-wide, and 32% statewide.

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 151 presents CVD mortality data for the period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of CVD deaths among some stratified populations in Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, CVD mortality rates were highest in Pamlico County and lowest in Perquimans County.
- In the region and the state, the CVD mortality rate for African American non-Hispanic persons was higher than the rate for white non-Hispanic persons.
- In the region and the state, the CVD mortality rate for males was higher than the comparable rate for females; in Pamlico County the reverse was true.

Table 151. 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
Perquimans County	27	33.9	10	N/A	1	N/A	0	N/A	16	N/A	22	35.9	38	38.0
Regional Average	29	37.3	21	67.6	0	N/A	0	N/A	21	64.2	29	40.5	51	43.7
Pamlico County	38	48.8	14	N/A	0	N/A	1	N/A	21	46.9	32	59.8	53	54.7
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

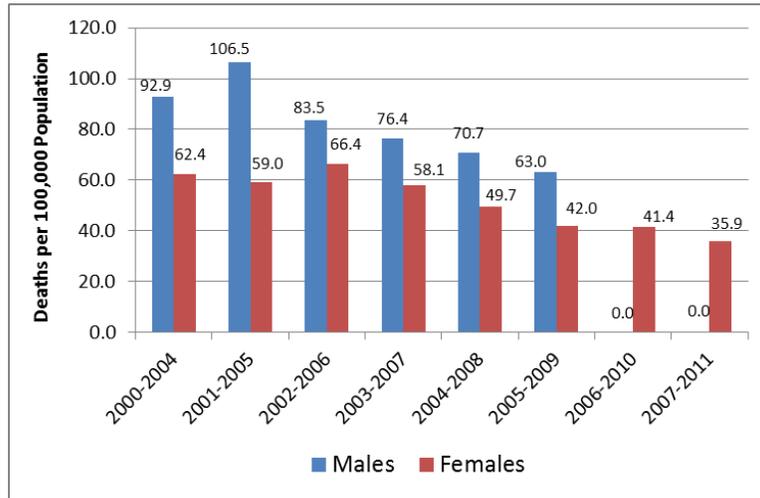
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- The graph demonstrates that the CVD mortality rate among Perquimans County males was higher than the CVD mortality rate among Perquimans County females over most of the period cited, and that rates for both decreased over time.

**Figure 25. Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Perquimans 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 152 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.
- At the state level, the CVD mortality rate was highest among African American non-Hispanic males, followed by African American non-Hispanic females, white non-Hispanic males, and white non-Hispanic females. 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 152. 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
Perquimans County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Regional Average	57.8	94.9	N/A	N/A	38.2	60.5	N/A	N/A
Pamlico County	N/A	N/A	N/A	N/A	N/A	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/>.

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 (57).

Alzheimer's disease was the fourth leading cause of death in Perquimans County, the eighth leading cause of death in the ARHS region, the seventh in Pamlico County, and the sixth in NC 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 153 lists inpatient hospitalizations among Perquimans County residents in several of the relevant ICD-9 code categories in 2012. There was one hospitalization of a Perquimans County resident region-wide in 2012 for diagnoses associated with Alzheimer's disease and other forms of dementia.

Table 153. Inpatient Hospitalizations of Perquimans 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	1	0	0

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

Table 154 presents data on the number of emergency department (ED) admissions of Perquimans 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 seven ED visits to the region's four hospitals by Perquimans County residents for diagnoses of Alzheimer's disease or other forms of dementia.

Table 154. Emergency Department Admissions of Perquimans 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	0	0	1	1
331.1	Frontotemporal dementia	0	0	0	0
331.2	Senile degeneration of the brain	0	0	0	0
290	Dementia	0	1	1	2
294.1	Dementia in condition classified elsewhere	0	0	0	0
294.2	Dementia, unspecified	0	0	4	4

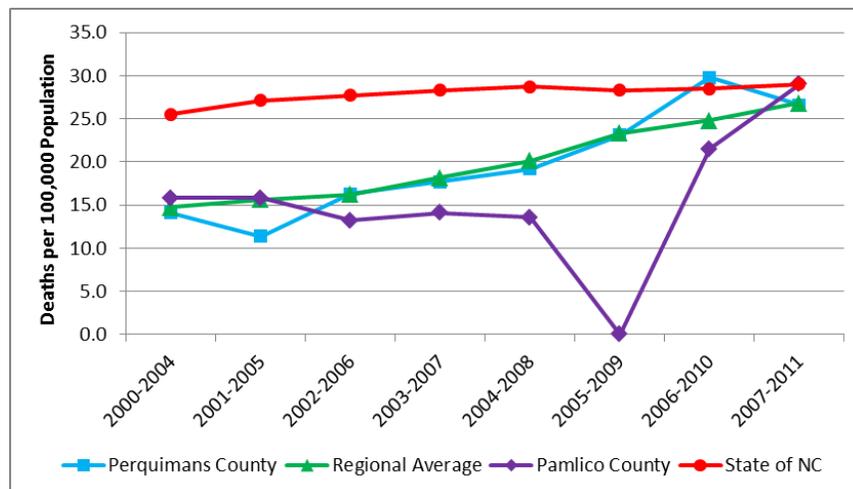
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Alzheimer’s Disease Mortality Rate Trend

Figure 26 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 Perquimans County was lower than the comparable rate for NC throughout most the interval cited. However, the Perquimans County rate rose 89% over the period, from 14.1 (unstable) in 2000-2004 to 26.6 (stable) in 2007-2011. Over the same period the NC rate rose 14%.
- Region-wide the Alzheimer’s disease mortality rate rose 83%, from 14.7 in 2000-2004 to 26.9 in 2007-2011.
- The Pamlico County Alzheimer’s disease mortality rate, like the rate in Perquimans, rose dramatically to a stable high in 2007-2011 after a previous period of instability.

Figure 26. 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 155 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 Perquimans 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 Perquimans County.
- 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 155. 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
Perquimans County	20	25.7	7	N/A	0	N/A	0	N/A	7	N/A	20	30.0	27	26.6
Regional Average	20	26.3	10	30.3	0	N/A	0	N/A	9	N/A	21	28.5	30	26.9
Pamlico County	21	28.7	6	N/A	0	N/A	0	N/A	3	N/A	24	40.4	27	29.0
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

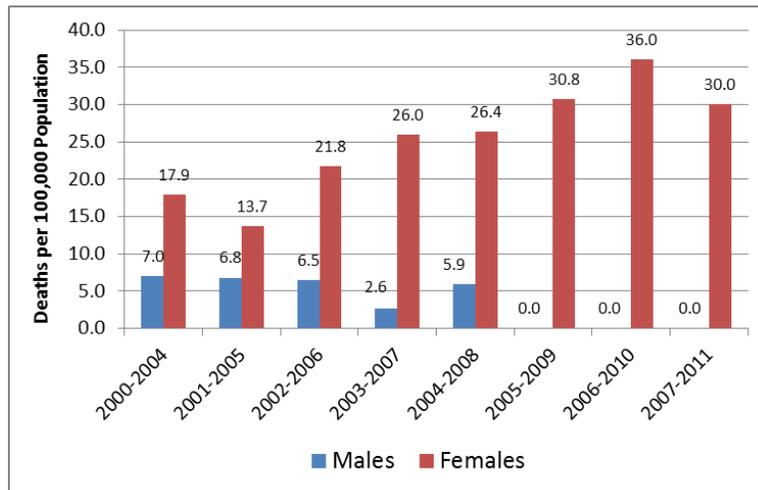
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 27 depicts gender-stratified Alzheimer’s disease mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- It appears that there may be a large gender difference in Alzheimer’s mortality rates in Perquimans County. According to data in the graph, the Alzheimer’s disease mortality rate among Perquimans County females was several times the comparable mortality rate among Perquimans County males. Although all the rates for males were either unstable or suppressed due to below-threshold numbers of events, the last three data points for females—the highest in the series—were stable. This disproportional pattern of gender-based Alzheimer’s disease mortality is common throughout NC.

Figure 27. Sex-Specific Alzheimer’s Disease Mortality Rate Trend, Perquimans 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.

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 (58).

CLRD was the fifth leading cause of death in Perquimans County, the fourth leading cause of death in Pamlico 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 156 presents the hospital discharge rate trend data for COPD (the term still used by some data-compiling organizations). According to this data, the highest COPD discharge rates were those in Perquimans County in every year cited except 2009.

**Table 156. COPD Hospital Discharge Rate Trend
(2005-2011)**

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	5.8	4.7	6.1	6.9	3.1	4.1	3.9
<i>Regional Average</i>	4.3	3.8	4.0	4.3	3.3	3.3	3.7
Pamlico County	2.2	3.7	4.2	4.0	4.4	2.7	1.7
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 53 hospital admissions for COPD among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

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 157 presents data on 2012 inpatient hospitalizations of Perquimans County residents for diagnoses of COPD. There were 49 inpatient hospitalizations at the four ARHS hospitals for treatment of COPD among Perquimans County residents in 2012.

Table 157. Inpatient Hospitalizations of Perquimans 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	8	0	41

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

Table 158 presents data on the number of emergency department admissions of Perquimans 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 511 and an annual average of 170 ED visits to the region's four hospitals by Perquimans County residents with diagnoses of COPD.

Table 158. Emergency Department Admissions of Perquimans 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	158	159	194

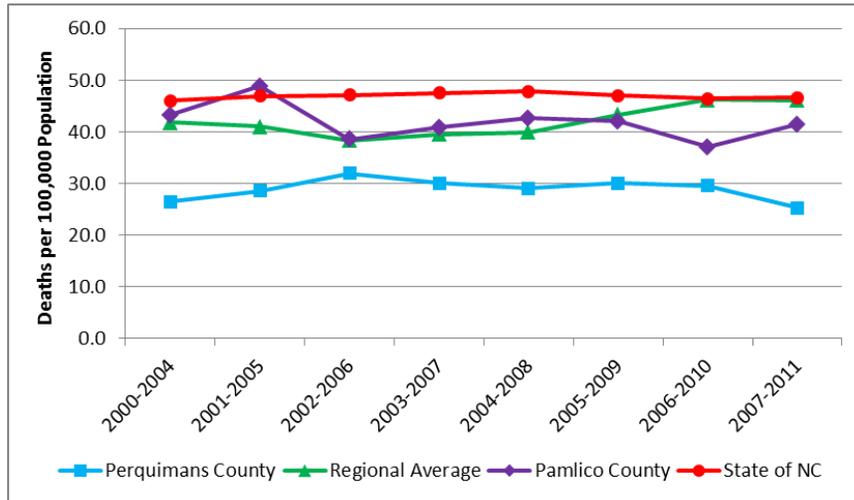
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

CLRD Mortality Rate Trend

Figure 28 displays the CLRD mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The CLRD mortality rate in Perquimans County was the lowest among the comparator jurisdictions throughout the period cited, with little net change (falling 4%) between 2000-2004 (26.5) and 2007-2011 (25.3).
- The CLRD mortality rate in Pamlico also decreased 4% between the endpoints of the period cited.
- The regional CLRD mortality rate increased by 10% between 2000-2004 and 2007-2011, the largest overall change in any of the four jurisdictions.
- At the state level, the CLRD mortality rate was essentially unchanged between 2004-2010 (46.0) and 2007-2011 (46.6).

**Figure 28. 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 159 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 Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons, the CLRD mortality rate was lowest in Perquimans County and highest in the region.
- Region-wide and statewide the CLRD mortality rate for African American non-Hispanic persons was lower than the rate for white non-Hispanic persons.
- There appeared to be a gender difference in CLRD mortality in each jurisdiction, but the direction of the disparity varied from place to place. In the region and the state the rate for males was higher than the rate for females; in Pamlico County the reverse was true.

**Table 159. 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
Perquimans County	21	27.9	4	N/A	0	N/A	0	N/A	17	N/A	8	N/A	25	25.3
Regional Average	41	52.9	9	42.5	0	N/A	0	N/A	29	73.4	22	35.4	51	46.1
Pamlico County	37	45.5	6	N/A	0	N/A	0	N/A	20	38.3	23	40.3	43	41.4
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

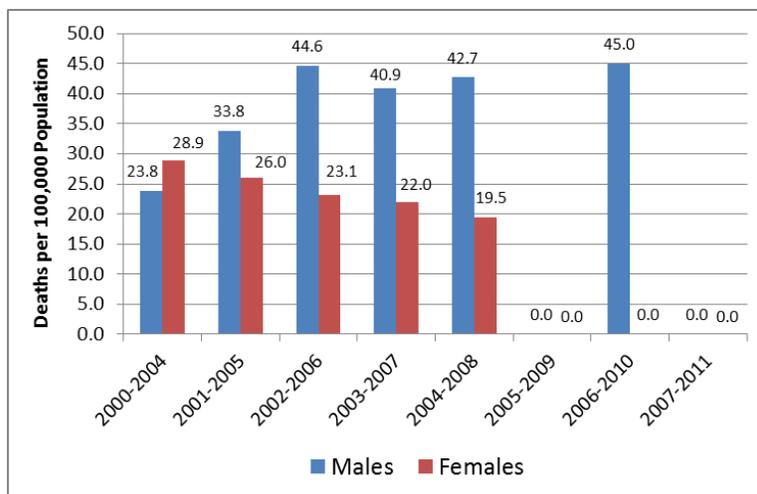
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 29 depicts gender-stratified CLRD mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- In every aggregate period except the first the CLRD mortality rate among Perquimans County males was higher than the rate for females. It should be noted that all rates for females were either unstable or suppressed, as were all rates for males *except* the rate in 2006-2010. That stable rate invokes greater confidence in the earlier, unstable rates.

Figure 29. Sex-Specific CLRD Mortality Rate Trend, Perquimans 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 160 presents CLRD mortality rates stratified by gender and race/ethnicity for 2007-2011.

- Because of below-threshold numbers of CLRD deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates.
- 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.

Table 160. 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
Perquimans County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Regional Average	78.4	83.2	N/A	N/A	42.4	N/A	N/A	N/A
Pamlico County	N/A	N/A	N/A	N/A	45.9	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 will be covered subsequently.)

Other (non-motor vehicle) unintentional injury was an unranked cause of death in Perquimans County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the sixth leading cause of death in the ARHS region, and the fifth in Pamlico County and 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 Perquimans County after CLRD.

All Other Unintentional Injury Hospitalizations

Neither the NC SCHS nor the four regional hospitals participating in this assessment use a diagnosis specific for hospitalizations caused by non-motor vehicle injury. Table 161 presents the hospital discharge rate trend data from NC SCHS for a category called *Injuries and Poisonings*, which includes hospitalizations resulting from unintentional injuries of all sorts, including motor vehicle crashes.

- The injuries and poisonings inpatient hospitalization rate in Pamlico County was the highest of the four listed in every year cited. The discharge rate for Perquimans County was the second-lowest or lowest in every year cited.

Table 161. Injuries and Poisonings Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	8.0	7.1	8.4	6.5	5.2	7.0	5.6
<i>Regional Average</i>	6.6	6.3	6.3	5.6	5.3	5.6	5.2
Pamlico County	9.5	11.8	9.9	11.9	8.7	9.3	8.6
State of NC	8.5	8.6	8.6	8.5	8.3	8.2	8.2

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 76 injury and poisoning hospitalizations among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

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 162 presents data on 2012 inpatient hospitalizations of Perquimans County residents for diagnoses of injury or poisoning. Note that this list does not include all diagnoses in the category. There were 60 inpatient hospitalizations at the four ARHS hospitals for treatment of injuries and poisoning among Perquimans County residents in 2012.

Table 162. Inpatient Hospitalizations of Perquimans 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	9	3	8
830-839	Dislocations	0	1	0	0
840-848	Sprains and strains	0	1	1	0
850-854	Intracranial injury	0	0	0	0
870-897	Open wounds	0	0	0	0
910-919	Superficial injury	0	0	0	0
930-939	Foreign body entering through orifice	0	0	0	1
960-979	Poisoning by drugs and medicinal substances	0	0	1	3
990--995	Other effects of external causes	0	0	0	2
996-999	Complications of surgical and medical care	0	10	0	20

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

Table 163 presents data on the number of emergency department (ED) admissions of Perquimans 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 3,640 and an annual average of 1,213 ED visits to the region's four hospitals by Perquimans County residents for diagnoses of injury and poisoning in the categories listed below.

Table 163. Emergency Department Admissions of Perquimans 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	132	152	170	454
830-839	Dislocations	14	30	25	69
840-848	Sprains and strains	239	307	397	943
850-854	Intracranial injury	9	13	13	35
860-869	Internal injury	0	3	1	4
870-897	Open wounds	194	210	222	626
910-919	Superficial injury	61	73	84	218
920-924	Contusions	151	192	242	585
925-929	Crushing injury	8	4	1	13
930-939	Foreign body entering through orifice	23	29	28	80
940-949	Burns	17	17	24	58
950-957	Injury to nerves and spinal cord	0	0	3	3
958-959	Traumatic complications	61	70	92	223
960-979	Poisoning by drugs and medicinal substances	15	20	5	40
980-989	Toxic effects of chiefly nonmedicinal substances	24	22	17	63
990-995	Other effects of external causes	40	43	52	135
996-999	Complications of surgical and medical care	26	23	42	91
TOTAL		1,014	1,208	1,418	3,640

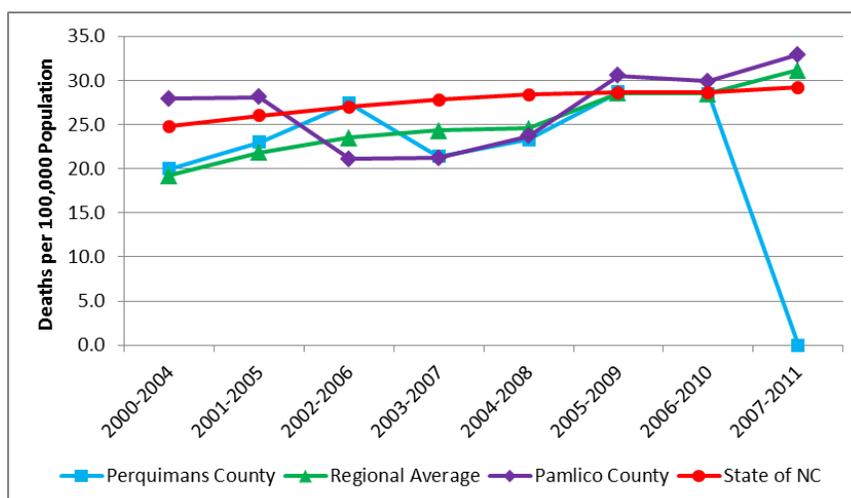
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

All Other Unintentional Injury Mortality Rate Trend

Figure 30 displays the all other unintentional injury mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The all other unintentional injury mortality rate in Perquimans County was quite variable over the period cited. The only stable rates for the county were those for 2005-2009 (28.7) and 2006-2010 (28.5).
- In Pamlico County the last four rates were stable and indicated a rising mortality rate trend.
- 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.

Figure 30. 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 164 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 direction of the 66% difference was the opposite.
- There appeared to be a 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 164. Race/Ethnicity-Specific and Sex-Specific All Other Unintentional Injury Mortality (Single Five-Year Aggregate Period, 2007-2011)

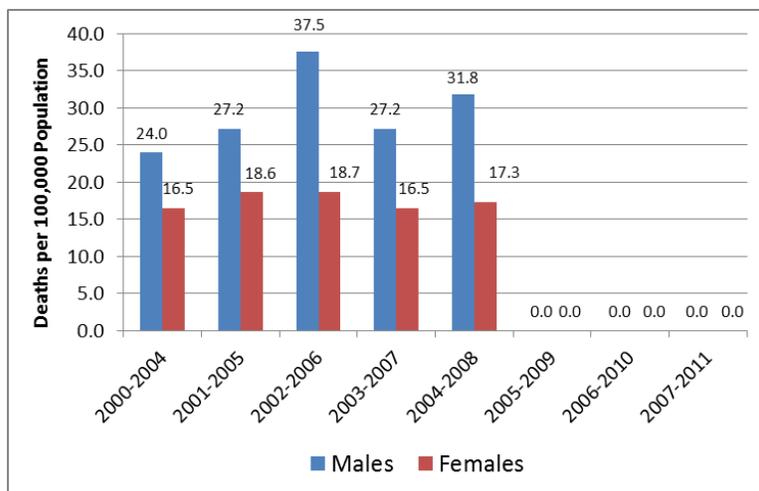
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	16	N/A	2	N/A	0	N/A	0	N/A	11	N/A	7	N/A	18	N/A
Regional Average	22	32.1	8	36.7	0	N/A	1	N/A	18	46.7	13	19.8	31	31.2
Pamlico County	24	35.4	4	N/A	0	N/A	0	N/A	18	N/A	10	N/A	28	32.9
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 31 depicts gender-stratified all other unintentional injury mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- Although all the gender-stratified mortality rates were unstable or suppressed, the data appeared to indicate a significant gender disparity in mortality from all other unintentional injuries, with males consistently experiencing the higher rate.

**Figure 31. Sex-Specific All Other Unintentional Injury Mortality Rate Trend, Perquimans 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).

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 (59,60).

Nephritis/nephrotic syndrome/nephrosis was an unranked cause of death in Perquimans County and Pamlico County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the ninth leading cause of death in the ARHS region, and the eighth 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 Perquimans County after all other unintentional injuries.

Nephritis, Nephrotic Syndrome and Nephrosis Hospitalizations

Table 165 presents the hospital discharge rate trend data for the above named composite of kidney disorders. According to this data, kidney disease caused a higher rate of hospitalizations in Perquimans County than in the ARHS region or statewide throughout much of the period cited.

Table 165. Nephritis, Nephrosis, Nephrotic Syndrome Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	1.5	1.8	1.1	0.5	0.9	1.6	1.6
<i>Regional Average</i>	1.3	1.4	1.3	1.0	1.0	1.2	1.3
Pamlico County	1.0	1.5	1.7	1.6	1.8	2.1	2.7
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 22 hospital admissions for nephritis, nephrotic syndrome and nephrosis among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

Diagnoses of nephritis, nephrotic syndrome and nephrosis are coded 580-589 in the ICD-9 system. Table 166 lists inpatient hospitalizations among Perquimans County residents in these code categories in 2012. There were 17 hospitalizations of Perquimans County residents region-wide in 2012 for diagnoses associated with nephritis, nephrotic syndrome and nephrosis.

Table 166. Inpatient Hospitalizations of Perquimans 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	17

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

Table 167 presents data on the number of emergency department (ED) admissions of Perquimans 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 25 ED visits to the region's four hospitals by Perquimans County residents with diagnoses of nephritis, nephrotic syndrome or nephrosis.

Table 167. Emergency Department Admissions of Perquimans 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	11	9	5	25

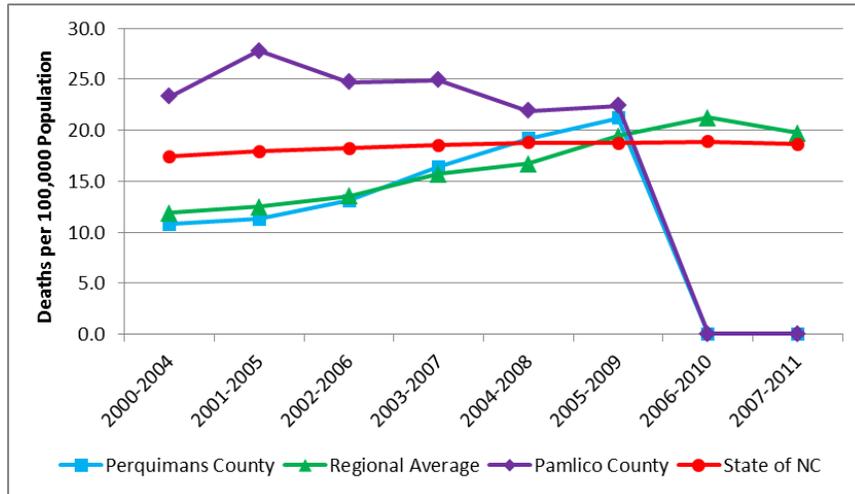
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend

Figure 32 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 highest in Pamlico County and lowest region-wide and in Perquimans County for most of the period cited. (All but the last two data points for Pamlico County represented stable rates.)
- The kidney disease mortality rate in Perquimans County rose 96% overall (from 10.8 to 21.2) between 2000-2004 and 2005-2009. Although the first five rates were unstable, the sixth was not, and was in line with the earlier data, so the increase in kidney disease mortality in the county is likely real.
- Region-wide the kidney disease mortality rate rose 66%; however, the regional average rate was based on several unstable county rates.
- The kidney disease mortality rate for NC as a whole rose 7% overall between 2000-2004 and 2007-2011.

Figure 32. 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 168 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 Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons and African American non-Hispanic persons kidney disease mortality rates were lower region-wide than in NC.
- 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 168. 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
Perquimans County	8	N/A	8	N/A	0	N/A	0	N/A	7	N/A	9	N/A	16	N/A
Regional Average	10	12.6	9	30.2	0	N/A	0	N/A	9	N/A	10	17.9	19	19.8
Pamlico County	10	N/A	7	N/A	0	N/A	0	N/A	7	N/A	10	N/A	17	N/A
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

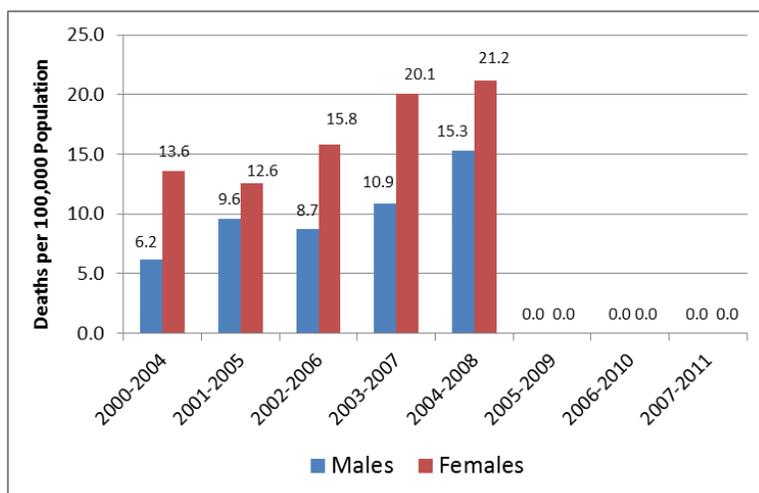
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 33 depicts gender-stratified kidney disease mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- According to the graph, the kidney disease mortality rate among Perquimans County females appeared to be higher than the comparable rate among Perquimans County males for all of the time periods for which there were rates for both. However, it should be noted that all the gender-stratified kidney disease mortality rates in the graph were either unstable or suppressed. Note that the kidney disease mortality rates for both males and females in the county appeared to be increasing.

Figure 33. Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend, Perquimans 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).

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 (61).

Diabetes was an unranked cause of death in Perquimans County and Pamlico County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the fifth leading cause of death in the ARHS region, and the seventh 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 Perquimans County after kidney disease.

Diabetes Mellitus Hospitalizations

Table 169 presents hospital discharge rate trend data for diabetes. The rates for Perquimans County were highest among the four jurisdictions in 2005, 2007, 2008, and 2010.

Table 169. Diabetes Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	2.5	1.8	2.4	2.1	1.2	2.8	1.5
<i>Regional Average</i>	1.9	1.7	1.5	1.7	1.2	1.6	1.5
Pamlico County	1.3	1.9	1.9	2.0	1.3	2.2	2.3
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 20 hospitalizations for diabetes among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

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 170 presents data on 2012 inpatient hospitalizations of Perquimans County residents for diagnoses of diabetes mellitus. There were 11 hospitalizations at the four ARHS hospitals for treatment of diabetes among Perquimans County residents in 2012.

Table 170. Inpatient Hospitalizations of Perquimans 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	3	0	8

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

Table 171 presents data on the number of emergency department admissions of Perquimans 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 116 and an annual average of 39 ED visits to the region's four hospitals by Perquimans County residents for diagnoses associated with diabetes.

Table 171. Emergency Department Admissions of Perquimans 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	27	44	45

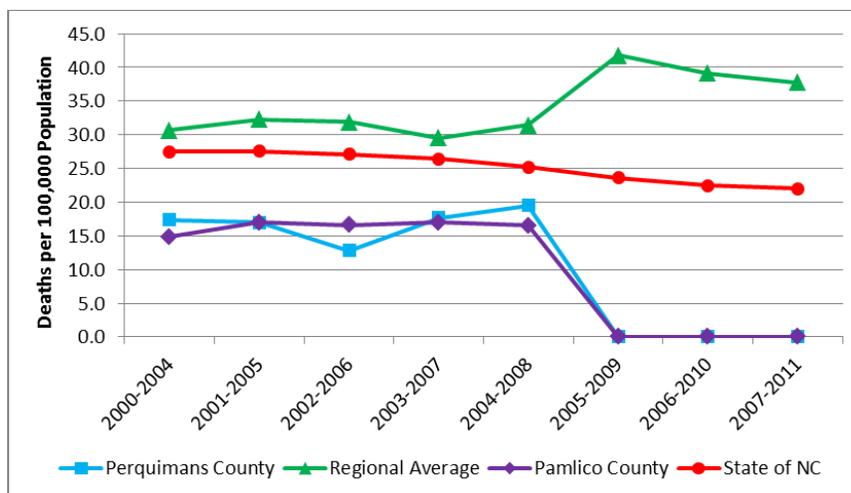
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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 Perquimans County was lower than the regional and state rates throughout the period cited, and very similar to the rate for Pamlico County. It should be noted that all the rates for both counties were either unstable or suppressed.
- The diabetes mortality rate for the region increased toward the end of the period cited, and was 23% higher in 2007-2011 than in 2000-2004 (30.7 vs. 37.8)
- The diabetes mortality rate for NC as a whole decreased 20% over the period cited, from 27.5 to 22.0.

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 172 presents diabetes mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of diabetes deaths among stratified populations in Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- Among white non-Hispanic persons and African American non-Hispanic persons diabetes mortality rates were higher in the region than statewide.
- Statewide, the diabetes mortality rate was higher among African American non-Hispanics than white non-Hispanics and higher among males than among females.

Table 172. Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality (Single Five-Year Aggregate Period, 2007-2011)

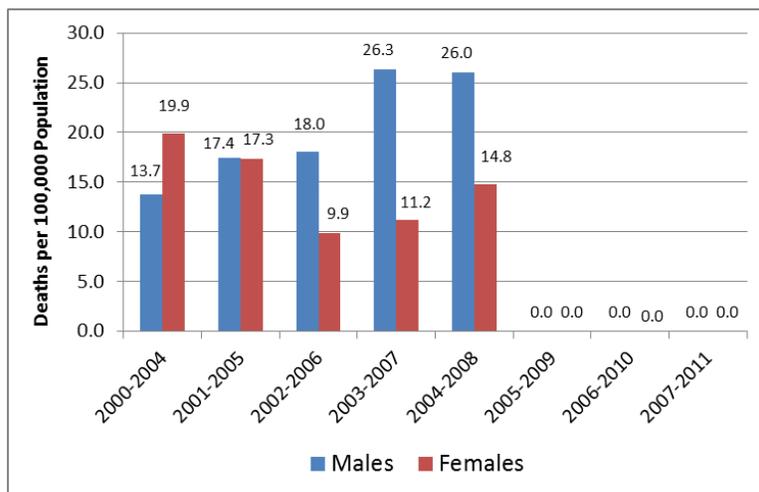
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	10	N/A	5	N/A	0	N/A	0	N/A	9	N/A	6	N/A	15	N/A
Regional Average	15	26.9	16	52.5	0	N/A	0	N/A	14	61.1	18	36.0	31	37.8
Pamlico County	10	N/A	5	N/A	0	N/A	0	N/A	9	N/A	6	N/A	15	N/A
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 Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- While the diabetes mortality rate among Perquimans County males recently has been higher than the comparable rate among females, it was not always the case. The rate difference was reversed early in the period cited. Note that all the rates in the graph were unstable.

Figure 35. Sex-Specific Diabetes Mellitus Mortality Rate Trend, Perquimans 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). Statewide diabetes mortality rates were lowest among Hispanic females (7.0), Hispanic males (11.4) and white non-Hispanic females (14.2).

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 (62).

Pneumonia/influenza was an unranked cause of death in Perquimans County and Pamlico County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the eleventh leading cause of death in the ARHS region and ninth 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 Perquimans County after diabetes.

Pneumonia and Influenza Hospitalizations

Table 173 presents hospital discharge rate trend data. It appeared from this data that no jurisdiction demonstrated a pattern of pneumonia/influenza hospitalizations.

Table 173. Pneumonia and Influenza Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	5.1	3.5	2.6	3.2	4.0	3.1	2.8
<i>Regional Average</i>	4.1	3.5	2.6	3.0	2.9	2.7	2.8
Pamlico County	4.8	3.7	3.7	2.6	2.7	2.6	2.0
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 38 hospital admissions for pneumonia/influenza among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

The ICD-9 codes for pneumonia are 480-487 and the code for influenza is 488. Table 174 presents data on 2012 hospitalizations of Perquimans County residents in the region’s hospitals for diagnoses in those categories. There were 30 inpatient hospitalizations of Perquimans County residents in ARHS region hospitals in 2012 with a diagnosis of pneumonia. There were no hospitalizations of county residents in 2012 associated with a diagnosis of influenza.

Table 174. Inpatient Hospitalizations of Perquimans 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	10	0	20
488	Influenza	0	0	0	0

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

Table 175 presents data on the number of emergency department (ED) admissions of Perquimans 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 250 ED visits to the region's four hospitals by Perquimans County residents with a diagnosis of pneumonia, and none with a diagnosis of influenza.

Table 175. Emergency Department Admissions of Perquimans 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	64	108	78	250
488	Influenza	0	0	0	0

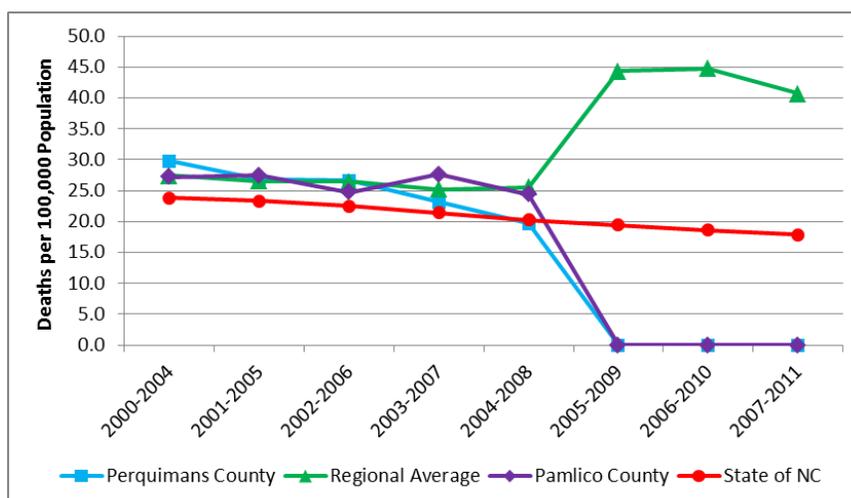
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Pneumonia and Influenza Mortality Rate Trend

Figure 36 displays the pneumonia/influenza mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The pneumonia/influenza mortality rate in Perquimans County appeared to be falling (from 29.8 in 2000-2004 to 19.7 in 2004-2008, or 34%) until the last three rates were suppressed due to below-threshold numbers of deaths.
- Similarly, the pneumonia/influenza mortality rate in Pamlico County seemed to be falling until the same kind of rate suppression occurred. The decrease between the 2000-2004 rate (27.2) and the 2004-2008 rate (24.4) was 10%.
- 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. Large mortality rate shifts at various times in various places are not uncommon for causes of death based on infectious agents.
- At the state level, the pneumonia/influenza mortality rate fell gradually to a current low 17.9.

Figure 36. 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 176 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 Perquimans 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 region-wide and statewide, with males suffering the higher rates.

Table 176. Race/Ethnicity-Specific and Sex-Specific Pneumonia and Influenza Mortality (Single Five-Year Aggregate Period, 2007-2011)

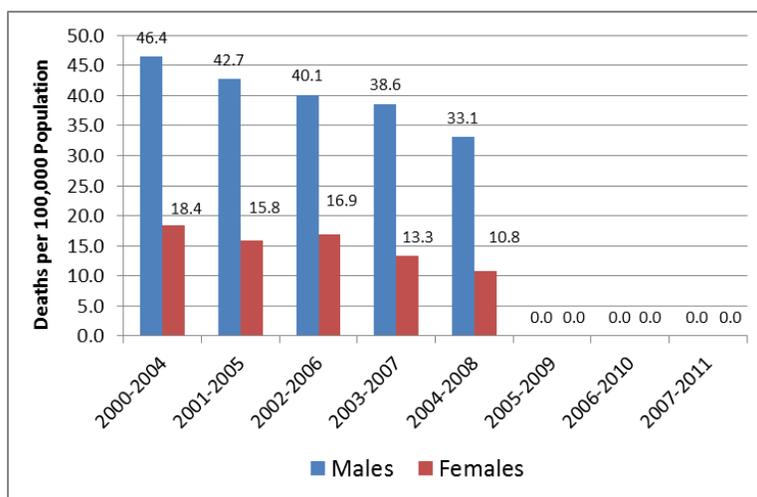
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	11	N/A	4	N/A	0	N/A	0	N/A	9	N/A	6	N/A	15	N/A
Regional Average	21	49.9	8	N/A	0	N/A	0	N/A	13	56.7	16	47.9	30	40.7
Pamlico County	11	N/A	3	N/A	0	N/A	0	N/A	7	N/A	7	N/A	14	N/A
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 37 depicts gender-stratified pneumonia/influenza mortality rates in Perquimans 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 Perquimans County. At times over the period cited below, the rate for males was almost three times the rate for females. It should be noted however, that all the rates for the period cited were either unstable or suppressed.

**Figure 37. Sex-Specific Pneumonia and Influenza Mortality Rate Trend, Perquimans 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).

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 (63). 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 an unranked cause of death in Perquimans County and Pamlico County in 2007-2011 due to below-threshold numbers of deaths. It was ranked the twelfth leading cause of death in the ARHS region and eleventh 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 Perquimans County after pneumonia and influenza.

Septicemia Hospitalizations

Table 177 presents hospital discharge rate trend data for septicemia. According to this data, the septicemia discharge rate in every jurisdiction was higher in 2011 than in 2005, in some cases twice as high.

Table 177. Septicemia Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	0.7	1.9	1.3	1.7	1.6	1.6	2.5
<i>Regional Average</i>	1.4	1.7	1.5	1.5	1.4	1.9	3.0
Pamlico County	1.5	1.7	2.2	1.9	2.2	3.2	3.6
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 34 hospital admissions for septicemia among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

The ICD-9 Code for septicemia is 038. Table 178 presents data on hospitalizations of Perquimans County residents for a diagnosis of septicemia. There were 51 such hospitalizations of Perquimans County residents in the four ARHS region hospitals in 2012.

Table 178. Inpatient Hospitalizations of Perquimans County Residents for Septicemia, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
038	Septicemia	0	10	3	38

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

Table 179 presents data on the number of emergency department (ED) admissions of Perquimans 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 24 ED visits to the region's four hospitals by Perquimans County residents with a diagnosis of septicemia.

Table 179. Emergency Department Admissions of Perquimans County Residents for Septicemia, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions			
		2010	2011	2012	Total
038	Septicemia	4	2	18	24

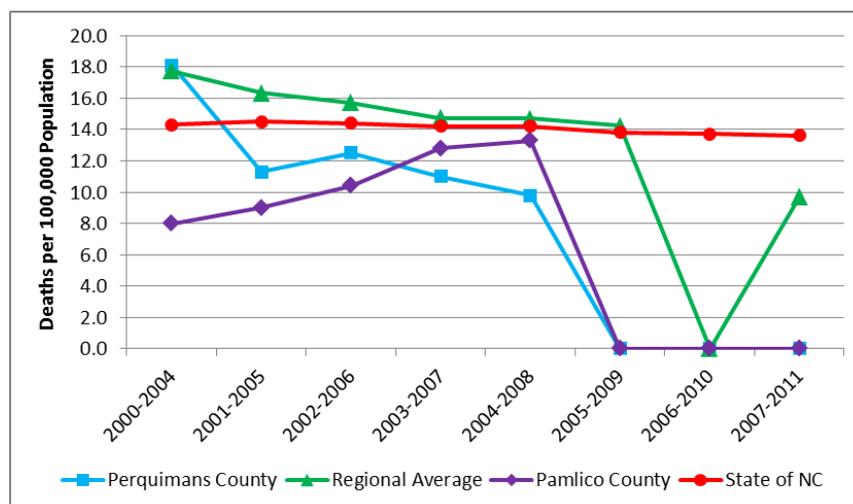
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Septicemia Mortality Rate Trend

Figure 38 displays the septicemia mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The ARHS region had the highest septicemia mortality rate in every period cited except the last two. The regional rate decreased 17% to the point in 2006-2010 when all the county rates upon which it was based were suppressed.
- The septicemia mortality rates in Perquimans County and Pamlico County were lower than the comparable rates region-wide and statewide for most of the period cited. It should be noted, however, that all the rates for the counties were unstable or suppressed.
- The septicemia mortality rate for NC as a whole decreased 5% between 2000-2004 and 2007-2011.

Figure 38. 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 180 presents septicemia mortality data for the aggregate period 2007-2011, stratified by race and sex.

- Due to below-threshold numbers of septicemia disease deaths among stratified populations in Perquimans 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-Hispanics than among white non-Hispanics.

Table 180. Race/Ethnicity-Specific and Sex-Specific Septicemia Mortality (Single Five-Year Aggregate Period, 2007-2011)

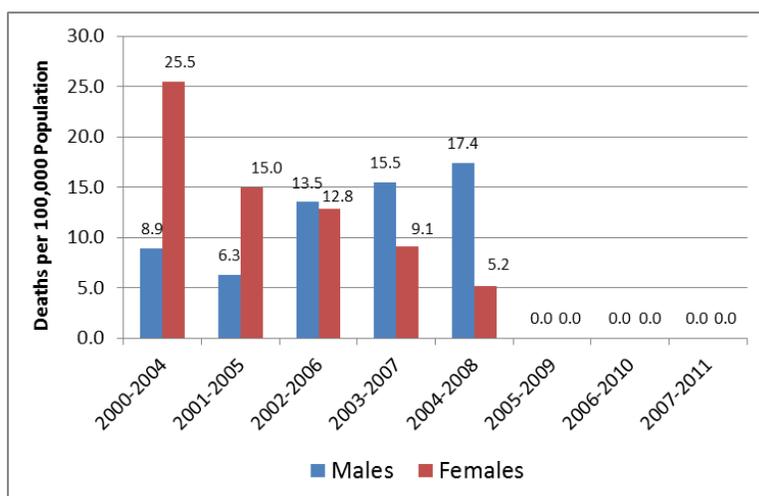
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	8	N/A	3	N/A	0	N/A	0	N/A	5	N/A	6	N/A	11	N/A
Regional Average	9	N/A	5	N/A	0	N/A	0	N/A	7	N/A	7	N/A	14	9.7
Pamlico County	12	N/A	4	N/A	0	N/A	0	N/A	7	N/A	9	N/A	16	N/A
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 39 depicts gender-stratified septicemia mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- It appears from the data below that the septicemia mortality rate for females in Perquimans County decreased over time even as the rate for males increased. However, it should be noted that all the septicemia mortality rates for the period cited were either unstable or suppressed.

Figure 39. Sex-Specific Septicemia Mortality Rate Trend, Perquimans 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 (64).

Chronic liver disease and cirrhosis was an unranked cause of death in Perquimans County, Pamlico County, and the ARHS region in 2007-2011 due to below-threshold numbers of deaths. It was ranked the thirteenth 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 Perquimans County after septicemia.

Chronic Liver Disease and Cirrhosis Hospitalizations

Table 181 presents hospital discharge rate trend data for chronic liver disease and cirrhosis. Note that most of the county-level rates were unstable.

Table 181. 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
Perquimans County	0.1	0.3	0.2	0.3	0.2	n/a	0.4
<i>Regional Average</i>	0.3	0.3	0.2	0.3	0.2	0.1	0.2
Pamlico County	0.7	0.2	0.1	0.5	0.5	0.7	0.6
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 five hospital admissions for chronic liver disease and cirrhosis among Perquimans County residents; this figure includes hospitalizations anywhere in NC (54).

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 182 presents data on 2012 hospitalizations of Perquimans County residents in the region's hospitals for diagnoses in those categories. There were six hospitalizations of county residents in the region's four hospitals in 2012 for diagnoses associated with chronic liver disease and cirrhosis.

Table 182. Inpatient Hospitalizations of Perquimans 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	0
572	Liver abscesses and sequelae of chronic liver disease	0	2	0	4

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

Table 183 presents data on the number of emergency department (ED) admissions of Perquimans 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 15 ED visits to the region's four hospitals by Perquimans County residents with diagnoses associated with chronic liver disease and cirrhosis.

Table 183. Emergency Department Admissions of Perquimans 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	1	1	4	6
572	Liver abscesses and sequelae of chronic liver disease	1	1	7	9

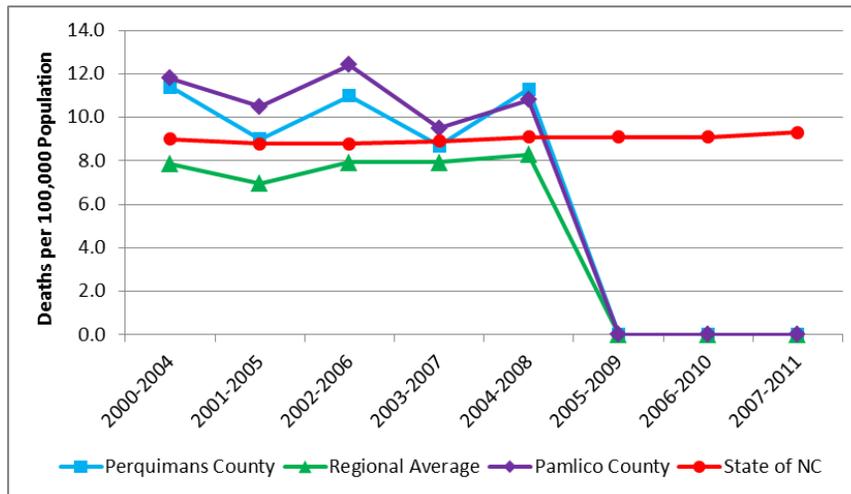
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

Chronic Liver Disease and Cirrhosis Mortality Rate Trend

Figure 40 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 Perquimans County or the other local jurisdictions 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 NC as a whole was essentially unchanged at approximately 9.0 over the period cited.

Figure 40. 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 184 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 Perquimans 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 184. 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
Perquimans County	5	N/A	2	N/A	0	N/A	0	N/A	7	N/A	0	N/A	7	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
Pamlico County	12	N/A	0	N/A	0	N/A	0	N/A	8	N/A	4	N/A	12	N/A
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

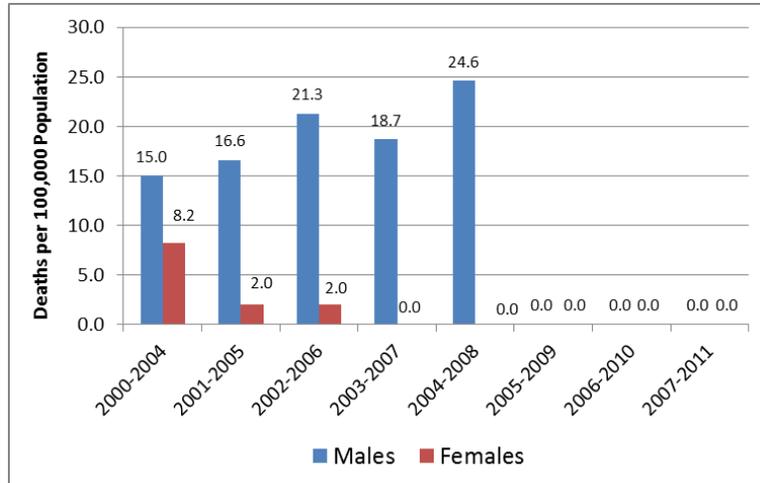
Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

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 41 depicts gender-stratified chronic liver disease and cirrhosis mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- According to the graph, the chronic liver disease and cirrhosis mortality rate among Perquimans County males appeared to be higher than the comparable rate among Perquimans County females for all the time periods shown. However, it should be noted that all the gender-stratified mortality rates for males were unstable or suppressed; all of the rates for females were unstable or suppressed except for those for 2003-2007 and 2004-2008 which were, in fact, true zero.

Figure 41. Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Perquimans 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.

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.

Unintentional motor vehicle injury was an unranked cause of death in Perquimans County in 2007-2011 due to below-threshold numbers of deaths. It was the seventh leading cause region-wide, the sixth in Pamlico County, and the tenth 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 Perquimans County after chronic liver disease and cirrhosis.

Unintentional Motor Vehicle Injury Hospitalizations

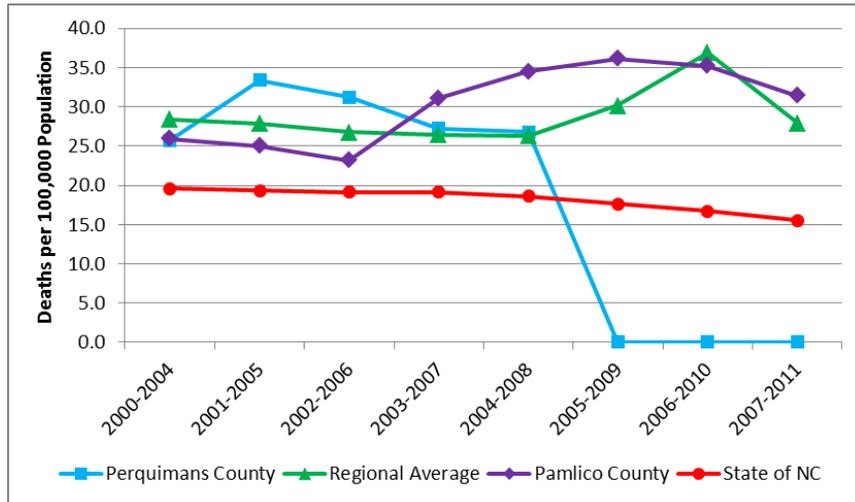
As noted previously in the discussion of all other unintentional injuries, neither the NC SCHS nor the four regional hospitals participating in this assessment use a diagnosis specific for hospitalizations caused by motor vehicle injury. Instead, hospitalizations for injuries of all kinds appear in a category called *Injuries and Poisonings*. Hospital discharge data and emergency department visit data relative to that category were presented previously in the section describing mortality due to all other unintentional injuries.

Unintentional Motor Vehicle Injury Mortality Rate Trend

Figure 42 displays the unintentional motor vehicle injury mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The unintentional motor vehicle injury mortality rate in Pamlico County was stable in the last four aggregate periods when it was the highest or second-highest among the four jurisdictions. The state rate was consistently the lowest.
- The mortality rates for Perquimans County all were unstable or suppressed, and the regional rates likely were unstable as well since they were based on county rates several of which were unstable or suppressed.
- At the state level, the unintentional motor vehicle injury mortality rate fell 21% over the period cited.

**Figure 42. 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 185 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 Perquimans County and elsewhere, mortality rates were suppressed for those groups, leaving little data to compare.
- The unintentional motor vehicle injury mortality rate was higher across the ARHS region than statewide.
- Statewide the motor vehicle injury mortality rates for African American non-Hispanics and white non-Hispanics 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 185. Race/Ethnicity-Specific and Sex-Specific Unintentional Motor Vehicle Injury Mortality
(Single Five-Year Aggregate Period, 2007-2011)**

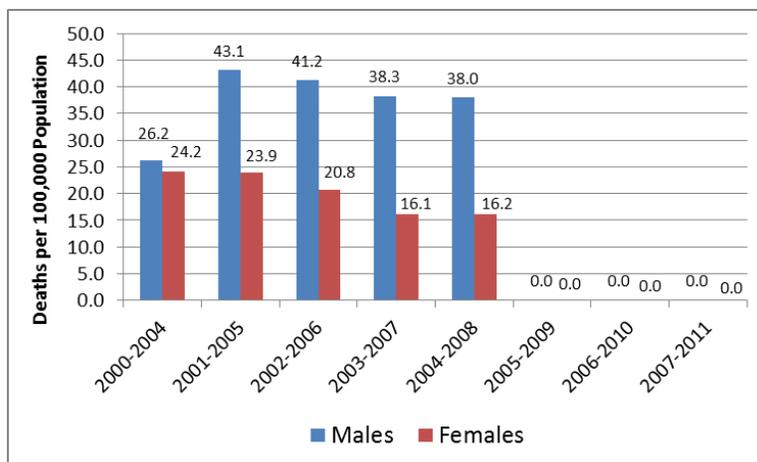
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	2	N/A	4	N/A	0	N/A	0	N/A	5	N/A	1	N/A	6	N/A
Regional Average	12	26.5	8	41.3	0	N/A	0	N/A	16	54.2	4	N/A	20	27.9
Pamlico County	17	N/A	4	N/A	0	N/A	0	N/A	12	N/A	9	N/A	21	31.4
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 43 depicts gender-stratified unintentional motor vehicle injury mortality rates in Perquimans 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, two or more times the comparable rate for females. Note, however, that all of the rates for females were either unstable or suppressed (as indicated by “0”).

Figure 43. Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Perquimans 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 unintentional motor vehicle 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 unintentional motor vehicle injury mortality rate in all racial groups was higher among males than females.

Statewide, the unintentional motor vehicle injury mortality rate was highest among African American non-Hispanic males (24.9), followed by white non-Hispanic males (22.3), non-Hispanic males of other races (21.9), and Hispanic males (20.1). All unintentional motor vehicle injury mortality rates statewide were lowest among Hispanic females (6.5), African American non-Hispanic females (7.3), non-Hispanic females of other races (8.5), and white non-Hispanic females (9.2)

Age Disparities in Motor Vehicle Injury Mortality

The unintentional motor vehicle injury mortality rate has a strong age component.

Table 186 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).
- Although the age-stratified mortality rates in all the counties were unstable, they appeared to follow the same pattern as NC as a whole.

**Table 186. 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
Perquimans County	n/a	n/a	n/a	n/a	2	15.4	n/a	n/a
<i>Regional Average</i>	23	24.5	3	15.3	7	32.7	8	23.7
Pamlico County	21	33.0	n/a	n/a	6	47.3	11	45.0
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 187 presents several years of data on the proportion of traffic crashes that were alcohol-related.

- The percent of alcohol-related crashes varied over time without a clear pattern in all the jurisdictions.
- In Perquimans County the six-year average of alcohol-related traffic crashes was 6.6%. Region-wide the comparable average was 5.7%, in Pamlico County it was 7.2%, and in NC it was 5.3%

**Table 187. 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
Perquimans County	212	23	10.8	226	9	4.0	216	10	4.6	246	16	6.5	224	17	7.6	243	14	5.8
<i>Regional Average</i>	363	22	5.9	360	23	6.5	345	18	5.2	367	21	5.8	348	20	5.7	347	18	5.1
Pamlico County	243	19	7.8	236	18	7.6	224	18	8.0	200	10	5.0	213	14	6.6	180	15	8.3
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.hsrrc.unc.edu/ncal/crashes.cfm>.

2 - Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

Table 188 presents detail on the outcomes of alcohol-related crashes in 2011.

- In 2011 in Perquimans County 5.8% of all crashes, 3.9% of all property damage only crashes, 10.0% of non-fatal crashes, and 50.0% of all fatal crashes were alcohol-related. Note however, that the figure for percent of alcohol-related fatal crashes was based on a small number of deaths, 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 188. 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
Perquimans County	243	14	5.8	181	7	3.9	60	6	10.0	2	1	50.0
Regional Average	347	18	5.0	236	8	2.9	108	9	9.0	3	1	28.9
Pamlico County	180	15	8.3	128	12	9.4	50	2	4.0	2	1	50.0
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 189 displays data on automobile/pedestrian crashes in Perquimans County over the period from 2006-2010.

- There were all together four automobile/pedestrian crashes during the period.
- The most common location for automobile/pedestrian crashes (4 of 4) was non-intersection sites.
- The most common type of automobile/pedestrian crash involved pedestrians walking along the roadway (2 of 4).
- The motorists in automobile/pedestrian crashes were most frequently in the 30-39 age group (3 of 4).
- The pedestrians in automobile/pedestrian crashes were most frequently in the 31-40 age group (2 of 4).
- Excessive speed was indicated in none of the crashes.
- Two of the four crashes were deemed hit-and-run.
- The motorist was at fault in one of the crashes and the pedestrian was at fault in one of the crashes. Fault was not coded in two of the crashes.

**Table 189. Automobile/Pedestrian Crashes, Perquimans County
(2006-2010)**

Parameter	2006	2007	2008	2009	2010	Total
Crash Location						
Non-Intersection	2	n/a	1	1	n/a	4
Total	2	n/a	1	1	n/a	4
Crash Type						
Assault with Vehicle	0	n/a	1	0	n/a	1
Walking Along with Traffic – From Front	1	n/a	0	0	n/a	1
Walking in Roadway	1	n/a	0	1	n/a	2
Total	2	n/a	1	1	n/a	4
Driver Age Group						
30-39	1	n/a	1	1	n/a	3
Unknown	1	n/a	0	0	n/a	1
Total	2	n/a	1	1	n/a	4
Pedestrian Age Group						
6-15	1	n/a	0	0	n/a	1
31-40	0	n/a	1	1	n/a	2
51-60	1	n/a	0	0	n/a	1
Total	2	n/a	1	1	n/a	4
Excessive Speed Indicated						
No	2	n/a	1	1	n/a	4
Total	2	n/a	1	1	n/a	4
Hit and Run						
No	1	n/a	1	0	n/a	2
Yes	1	n/a	0	1	n/a	2
Total	2	n/a	1	1	n/a	4
Fault						
Motorist at Fault	1	n/a	0	0	n/a	1
Pedestrian at Fault	1	n/a	0	0	n/a	1
Fault Not Coded	0	n/a	1	1	n/a	2
Total	2	n/a	1	1	n/a	4

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 190 displays data on automobile/bicycle crashes in Perquimans County in the period from 2006-2010.

- There were all together three automobile/bicycle crashes in Perquimans County during the period.
- The most common location for automobile/bicycle crashes (3 of 3) was non-intersection sites.
- There were three different types of crashes: bicyclist making a left turn, motorist overtaking when bicyclist swerved, and motorist overtaking in unknown circumstances.
- The motorists in automobile/bicycle crashes were most frequently in the 50-59 age group (2 of 3).
- The cyclists in automobile/bicycle crashes were all under the age of 30.
- Excessive speed was not indicated in any of the three crashes, and none was deemed hit-and-run.
- The bicyclist was at fault in one of automobile/bicycle crashes, but no motorists were deemed at fault. Fault was not coded or was unknown in two crashes.

**Table 190. Automobile/Bicycle Crashes, Perquimans County
(2006-2010)**

Parameter	2006	2007	2008	2009	2010	Total
Crash Location						
Non-Intersection	2	n/a	n/a	1	n/a	3
Total	2	n/a	n/a	1	n/a	3
Crash Type						
Bicyclist Left Turn – Same Direction	1	n/a	n/a	0	n/a	1
Motorist Overtaking – Bicyclist Swerved	0	n/a	n/a	1	n/a	1
Motorist Overtaking – Other/Unknown	1	n/a	n/a	0	n/a	1
Total	2	n/a	n/a	1	n/a	3
Driver Age Group						
0-19	0	n/a	n/a	1	n/a	1
50-59	2	n/a	n/a	0	n/a	2
Total	2	n/a	n/a	1	n/a	3
Bicyclist Age Group						
6-10	0	n/a	n/a	1	n/a	1
20-24	1	n/a	n/a	0	n/a	1
25-29	1	n/a	n/a	0	n/a	1
Total	2	n/a	n/a	1	n/a	3
Excessive Speed Indicated						
No	2	n/a	n/a	1	n/a	3
Total	2	n/a	n/a	1	n/a	3
Hit and Run						
No	2	n/a	n/a	1	n/a	3
Total	2	n/a	n/a	1	n/a	3
Fault						
Bicyclist at Fault	1	n/a	n/a	0	n/a	1
Fault Not Coded	0	n/a	n/a	1	n/a	1
Unknown	1	n/a	n/a	0	n/a	1
Total	2	n/a	n/a	1	n/a	3

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.

Suicide

Suicide was an unranked cause of death in Perquimans County and Pamlico 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 Perquimans County after unintentional motor vehicle injury.

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 Perquimans County residents with that ICD-9 code at any of the four ARHS hospitals in 2012. There were, however, 30 emergency department visits by Perquimans County residents coded for suicide ideation, which are listed in Table 191.

Table 191. Emergency Department Admissions of Perquimans 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	13	4	13	30

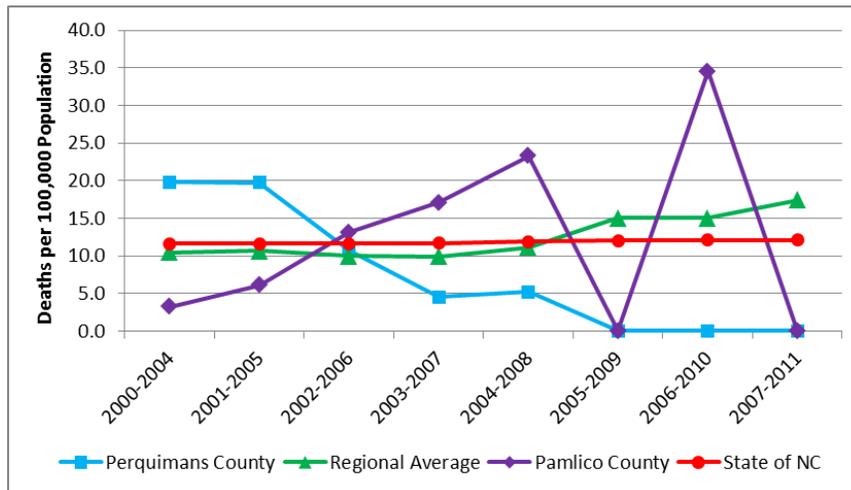
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

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.

- The suicide mortality rates for Perquimans and Pamlico Counties depicted in the graph all were unstable or suppressed. The volatility of the data plots for the counties is partially due to small numbers.
- 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.
- 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 192 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 Perquimans County and elsewhere, mortality rates were suppressed for those groups.
- Statewide the suicide mortality rate for white non-Hispanic persons was three times the rate for African American non-Hispanic persons.
- 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 192. 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
Perquimans County	5	N/A	0	N/A	0	N/A	0	N/A	4	N/A	1	N/A	5	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
Pamlico County	15	N/A	2	N/A	0	N/A	1	N/A	14	N/A	4	N/A	18	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.

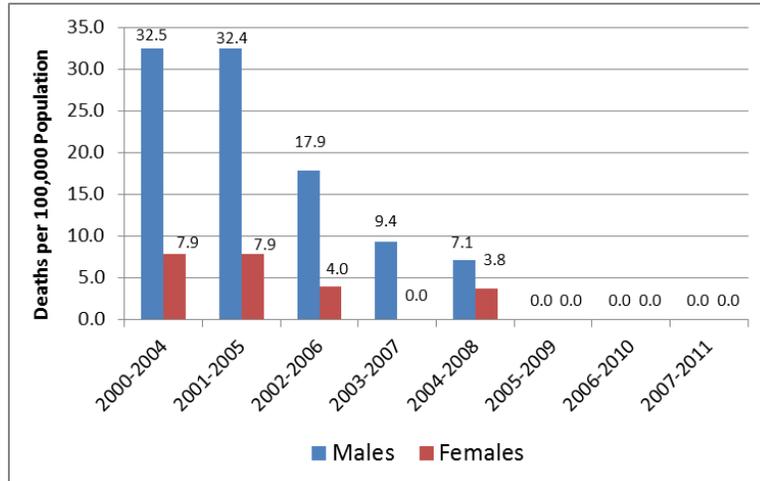
Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 45 depicts gender-stratified suicide mortality rates in Perquimans 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 Perquimans County. The graph demonstrates that the suicide rate among 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, Perquimans 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).

Homicide

Homicide was an unranked cause of death in Perquimans County, Pamlico County, and the ARHS region in 2007-2011 due to below-threshold numbers of deaths. It was ranked the fourteenth 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 Perquimans County after suicide.

Homicide Hospitalizations

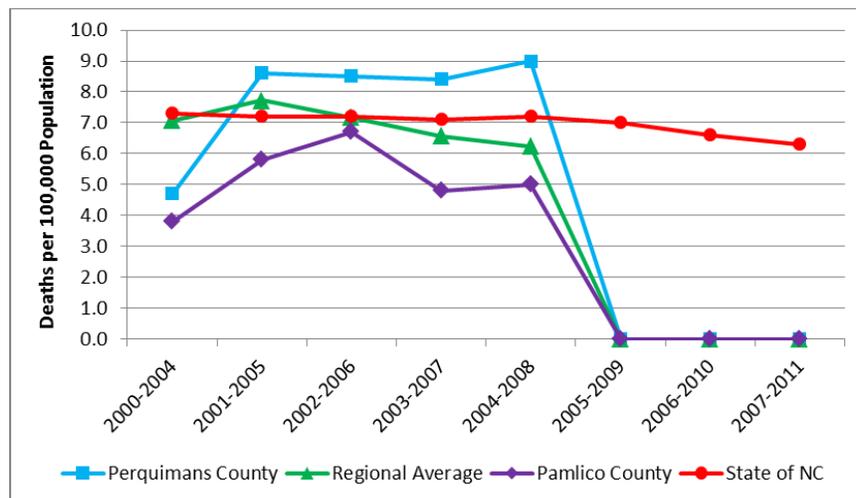
At the present time the NC SCHS does not track hospitalizations related to homicide or attempted homicide. There is an ICD-9 code descriptive of Homicidal Ideation (V62.85), and one Perquimans County resident was admitted under that code to the emergency department of an ARHS area hospital in the period 2010-2012.

Homicide Mortality Rate Trend

Figure 46 displays the homicide mortality rate trend over time for each of the four jurisdictions being compared in this CHA.

- The homicide mortality rate in Perquimans County appeared to be the highest among the comparator jurisdictions during most of the period for which there are measured rates. It should be noted, however, that all the county-level homicide rates, as well as the regional rate, were either unstable or suppressed.
- At the state level, the homicide rate decreased 14% over the period cited.

**Figure 46. 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 193 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, the homicide mortality rate among African American non-Hispanic persons was four times the rate among white non-Hispanic persons.
- 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 193. Race/Ethnicity-Specific and Sex-Specific Homicide Mortality (Single Five-Year Aggregate Period, 2007-2011)

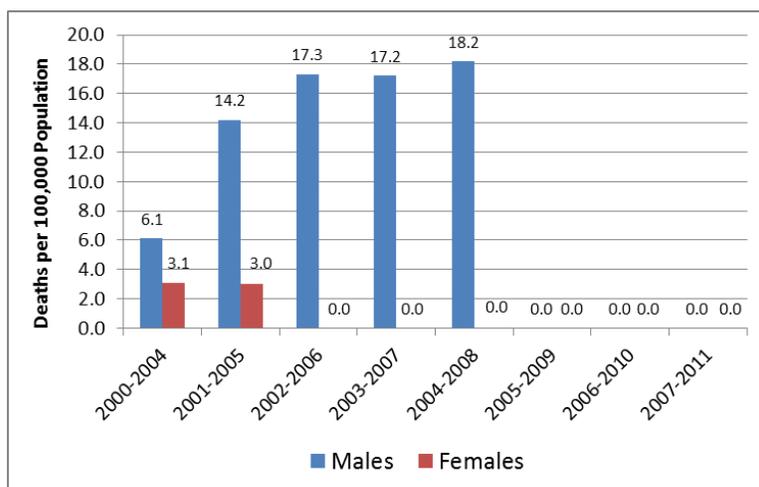
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	0	N/A	2	N/A	0	N/A	0	N/A	2	N/A	0	N/A	2	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
Pamlico County	3	N/A	0	N/A	0	N/A	0	N/A	1	N/A	2	N/A	3	N/A
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 47 depicts gender-stratified homicide mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- Although all the rates for males were either unstable or suppressed due to below-threshold numbers of events, the disproportional gender-based pattern of homicide mortality noted—mortality rates much higher among males—is common throughout NC.
- Note that the “zero” values plotted for Perquimans County females in the 2002-2006, 2003-2007 and 2004-2008 aggregate periods actually represent true zero values. The last three plots of “zero” represent suppressed rates.

Figure 47. Sex-Specific Homicide Mortality Rate Trend, Perquimans 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 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).

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) (65).

AIDS was an unranked cause of death in Perquimans County, Pamlico 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 Perquimans County after homicide.

AIDS Hospitalizations

Table 194 presents hospital discharge rate trend data for AIDS. All the rates at the county and regional level were unstable or suppressed. Statewide, the AIDS hospital discharge was 0.2 for many years, but in 2011 decreased to 0.1.

Table 194. AIDS Hospital Discharge Rate Trend (2005-2011)

Location	Rate (Discharges per 1,000 Population)						
	2005	2006	2007	2008	2009	2010	2011
Perquimans County	0.9	0.6	0.6	0.2	0.1	0.2	0.1
Regional Average	0.4	0.3	0.2	0.2	0.2	0.1	0.1
Pamlico County	n/a	n/a	0.1	0.1	0.2	0.2	n/a
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 Perquimans County residents; this figure could represent a hospitalization anywhere in NC (54).

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 195, there were two hospitalizations of Perquimans County residents with AIDS in ARHS region hospitals in 2012.

Table 195. Inpatient Hospitalizations of Perquimans 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	2

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

Table 196 presents data on the number of emergency department admissions of Perquimans 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 one ED visit to the region's four hospitals by Perquimans County residents with a diagnosis of AIDS.

Table 196. Emergency Department Admissions of Perquimans 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	1	0	0	1

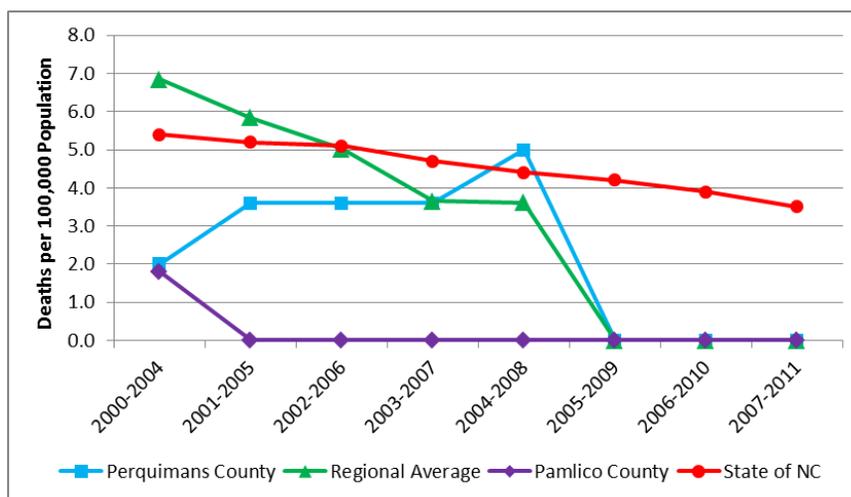
Source: Vidant Bertie Hospital, Vidant Chowan Hospital, Vidant Roanoke-Chowan Hospital and Albemarle Health

AIDS Mortality Rate Trend

Figure 48 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 was decreasing 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 48. 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 197 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 197. Race/Ethnicity-Specific and Sex-Specific AIDS Mortality (Single Five-Year Aggregate Period, 2007-2011)

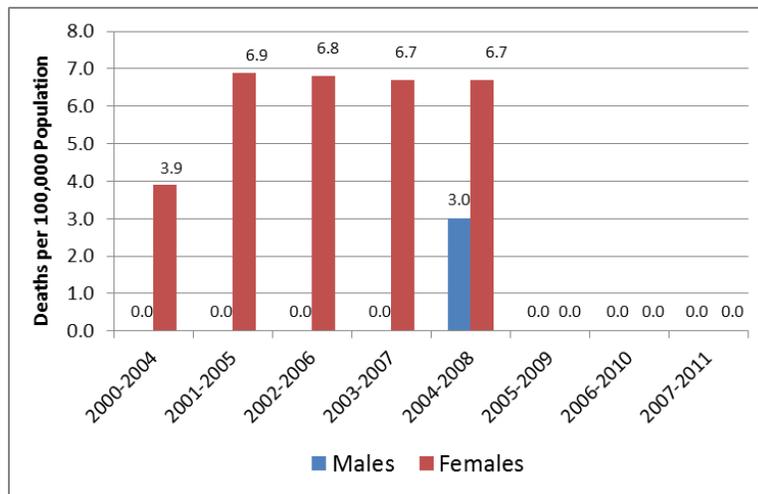
Location	Deaths, Number and Rate (Deaths per 100,000 Population)													
	White, Non-Hispanic		African American, Non-Hispanic		Other Races, Non-Hispanic		Hispanic		Male		Female		Overall	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Perquimans County	0	N/A	1	N/A	0	N/A	0	N/A	1	N/A	0	N/A	1	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
Pamlico County	1	N/A	0	N/A	0	N/A	0	N/A	1	N/A	0	N/A	1	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 49 depicts gender-stratified AIDS mortality rates in Perquimans County for the aggregate periods 2000-2004 through 2007-2011.

- All the AIDS mortality rates shown in the graph were either unstable or suppressed. The apparent pattern of higher AIDS mortality rates for females than for males definitely is *not* the norm.

Figure 49. Sex-Specific AIDS Mortality Rate Trend, Perquimans 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.

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 (66).

Table 198 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 highest chlamydia infection rate in 2007 and 2009 was in Perquimans County; in 2008, 2010 and 2011 the highest rate was the state rate.
- 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 198. 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
Perquimans County	45	361.6	36	281.9	66	518.3	40	297.3	36	267.6
Regional Average	62	313.1	80	385.1	93	446.8	88	405.3	96	436.4
Pamlico County	28	225.3	37	297.7	35	281.8	36	273.9	37	281.5
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 (67).

Table 199 presents incidence data (i.e., new cases diagnosed) for gonorrhea infections.

- The regional gonorrhea incidence rate was the highest, and the rate for Pamlico County was the lowest, in every aggregate period.

Table 199. Gonorrhea Infection Incidence Trend (Five-Year Aggregate Periods, 2002-2006 to 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
Perquimans County	112	187.4	111	182.4	105	169.0	110	173.9	94	148.0
Regional Average	218	215.5	209	206.1	202	195.4	207	194.5	195	179.5
Pamlico County	36	55.2	29	44.5	27	41.5	25	38.6	33	52.5
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 200 presents the 2006-2010 racially/ethnically-stratified gonorrhea infection rates for the four jurisdictions.

- In every jurisdiction the highest *stable* gonorrhea incidence rate occurred among the African American non-Hispanic population, in which group the incidence rate was 8 or more times the comparable rate among the white non-Hispanic population.
- 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 200. 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
Perquimans County	94	148.0	21	45.5	68	418.2	0	0.0	5	605.3
<i>Regional Average</i>	195	179.5	34	51.6	158	430.1	0	39.2	2	178.7
Pamlico County	33	52.5	18	38.2	15	107.0	0	0.0	0	0.0
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 Perquimans County and its comparators tend to be low and yield extremely variable or suppressible rates. (For example, there were three new HIV cases in Perquimans County in the three-year period from 2009-2011.) Instead, Table 201 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 30 persons with HIV/AIDS living in Perquimans County.

Table 201. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2011 (By County of Residence)

Location	Number of Living Cases
Perquimans County	30
<i>Regional Average</i>	37
Pamlico County	17
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 202 presents a summary of 2012 inpatient hospitalizations of Perquimans County residents in the four region hospitals for *selected diagnoses* of infectious and parasitic diseases.

- In 2012 there were seven hospitalizations among Perquimans County residents for diagnoses of infectious and parasitic diseases *in selected categories listed below*. The majority of the hospitalizations (4 of 7) were associated with intestinal infectious diseases.

Table 202. Inpatient Hospitalizations of Perquimans 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	1	1
008.5	Bacterial enteritis, unspecified	0	0	0	1	1
008.8	Viral enteritis	0	0	0	2	2
050-059	Viral diseases generally accompanied by exanthem					
053	Herpes zoster (incl. shingles)	0	0	0	1	1
054	Herpes simplex	0	0	0	1	1
070-079	Other diseases due to viruses and chlamydiae					
070	Viral hepatitis	0	0	0	1	1

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

Table 203 lists a summary of emergency department visits to all four area hospitals by Perquimans 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.

- The list summarizes 329 ED visits by Perquimans County residents resulting in specific diagnoses of infectious and parasitic diseases.
- Among the 52 ED admissions for intestinal infectious diseases listed, the most common diagnosis (48 cases) was viral enteritis.
- Among the 85 ED admissions for other bacterial diseases listed, the most common diagnosis (81 cases) was streptococcal sore throat.
- Among the 30 ED admissions for viral diseases generally accompanied by exanthema (rash) listed, the most common diagnosis (23 cases) was *Herpes zoster* (e.g., shingles).
- Among the 95 ED admissions for other diseases due to viruses and chlamydiae listed, the most common diagnosis (92 cases) was unspecified viral infection.
- Of the 65 ED admissions for mycoses (fungal infections) listed, the most common diagnosis (51 cases) was candidiasis (i.e., yeast infections).

Table 203. Emergency Department Admissions of Perquimans County Residents for Infectious and Parasitic Diseases, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Emergency Department Visits		
		2010	2011	2012
001-009	Intestinal Infectious Diseases			
005	Other bacterial food poisoning	1	0	0
008.8	Viral enteritis	13	16	19
009	Ill-defined intestinal infections	0	1	2
030-041	Other bacterial diseases			
034.0	Streptococcal sore throat	23	44	14
034.1	Scarlet fever	1	1	1
041	Bacterial infections in conditions classified elsewhere	0	1	0
050-059	Viral diseases generally accompanied by exanthem			
052	Chickenpox	0	1	0
053	Herpes zoster (incl. shingles)	7	6	10
054	Herpes simplex	0	3	3
070-079	Other diseases due to viruses and chlamydiae			
072	Mumps			
075	Infectious mononucleosis	0	3	0
79.99	Unspecified viral infections	25	38	29
080-088	Rickettsiosis and other arthropod-borne diseases			
088.81	Lyme disease	1	1	0
110-118	Mycoses			
110	Dermatophytosis	1	8	5
112	Candidiasis	13	19	19

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 (68).

Table 204 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 small and 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 204. 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
Perquimans County	30	231.4	4	190.4	11	84.7	2	97.4	14	104.1	6	265.8
<i>Regional Average</i>	25	123.0	5	128.2	22	108.4	4	85.4	22	117.2	5	131.7
Pamlico County	24	186.2	1	55.2	25	194.7	4	224.8	13	98.9	1	52.2
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 205 presents data on 2012 inpatient hospitalizations of Perquimans County residents for a diagnosis of asthma. There were 12 inpatient hospitalizations at the four ARHS hospitals for treatment of asthma among Perquimans County residents in 2012.

Table 205. Inpatient Hospitalizations of Perquimans County Residents for Asthma, ARHS Region Hospitals (2012)

ICD-9 Code	Diagnosis	Number of Inpatient Hospitalizations			
		VBER	VCHO	VROA	AH
493	Asthma	0	1	0	11

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

Table 206 presents data on the number of emergency department admissions of Perquimans 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 242 ED visits to the region's four hospitals by Perquimans County residents for treatment of asthma; this computes to an annual average of 81 visits.

Table 206. Emergency Department Admissions of Perquimans County Residents for Asthma, ARHS Region Hospitals (2010-2012)

ICD-9 Code	Diagnosis	Number of ED Admissions		
		2010	2011	2012
493	Asthma	74	75	93

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 (69).

Table 207 presents estimates of the prevalence of diagnosed diabetes in adults age 20 and older in Perquimans County and its local comparators (state-level data was not available).

- The five-year average prevalence in Perquimans County was 11.5%; the five-year average for the region was 11.4%, and the five-year average for Pamlico County was 11.9%.
- In Perquimans County the prevalence of diabetes increased 8% between 2005 and 2009; regionally the increase was 11%. In Pamlico County diabetes prevalence increased 11%.

**Table 207. 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	
	#	%	#	%	#	%	#	%	#	%
Perquimans County	1,045	11.4	1,096	11.5	1,068	11.1	1,111	11.2	1,225	12.3
Regional Average	1,457	11.1	1,502	11.1	1,533	11.3	1,578	11.3	1,718	12.3
Pamlico County	1,146	11.4	1,159	11.4	1,217	12.0	1,202	11.9	1,261	12.6
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 11 inpatient hospitalizations at area hospitals among Perquimans County residents for diabetes, and from 2010-2012 there were 116 ED admissions associated with the diagnosis of diabetes.

Obesity

Obesity in Adults

Table 208 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.

- The five-year average prevalence of adult obesity in Perquimans County was 30.8%; in Pamlico County the five-year average prevalence was 28.0%, 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 Perquimans County, the estimated prevalence of diagnosed obesity in adults increased 21% between 2005 and 2009. The increase region-wide was 13% and in Pamlico County the increase was 2%.

**Table 208. 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	
	#	%	#	%	#	%	#	%	#	%
Perquimans County	2,540	27.6	2,836	29.7	3,028	31.4	3,185	32.1	3,323	33.4
Regional Average	3,934	29.5	4,207	30.7	4,401	31.9	4,490	32.0	4,730	33.4
Pamlico County	2,719	27.0	2,883	28.3	2,900	28.7	2,890	28.6	2,744	27.5
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 (70). (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:

$$\text{BMI} = (\text{weight in kilograms}) / (\text{height in meters})$$

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 209 presents NC NPASS data for children ages 2-4 for the period 2007-2011.

- Perquimans County had the highest percentage of obese 2-4 year olds among the comparators in 2007, 2009, 2010, and 2011. The county also had the highest percentage of overweight 2-4 year olds in 2007, 2008 and 2011.
- The five-year average percent of overweight 2-4 year old children in Perquimans County was 16.7%; the five-year average of obese 2-4 year olds in the county was 19.5%.
- Region wide, the five-year average percent overweight was 15.0% and the five-year average percent obese was 16.0%.
- In Pamlico County, the five-year average percent overweight was 20.5% and the four-year average (no data for 2010) percent obese was 15.4%.
- Statewide, the five-year average percent overweight was 15.9% and the five-year average percent obese was 15.5%.

Table 209. 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
Perquimans County	16.4	18.0	21.2	14.7	9.3	22.4	19.1	19.7	17.6	22.5
<i>Regional Average</i>	14.9	15.2	15.5	17.1	14.0	15.1	15.6	16.2	15.2	16.6
Pamlico County	14.7	15.9	18.8	9.8	22.6	18.9	29.4	N/A	16.8	16.8
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. Perquimans 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 Perquimans County.

As noted in the Health Resources section of this report the ratio of dentists-to-population in Perquimans County is low, and there are few dentists in the county that accept Medicaid and/or HealthChoice patients. With resources for dental care in limited 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 210 lists ED visits to the region's four hospitals in 2010-2012 by Perquimans County residents for conditions associated with this code category.

- For the three year period 2010-2012, Perquimans County residents made a total of 423 visits (an annual average of 141 visits) to local EDs for attention to dental problems.

Table 210. Emergency Department Admissions of Perquimans 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	0	0	0
520.7	Teething syndrome	1	1	0
521.0	Dental caries	30	45	45
522	Diseases of pulp and periapical tissue	35	25	33
523	Gingival and periodontal disease	2	1	8
524	Dentofacial anomalies, including malocclusion	4	6	4
525	Other diseases of the teeth and supporting structure	46	47	90
Total		118	125	180

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* dental ED visits to area hospitals by Perquimans County residents:

- Self-pay covered an annual average of 39% of the ED visits listed
- Medicaid covered an annual average of 24% of those visits
- Medicare covered an annual average of 4% 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 211 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 Perquimans County receive dental services at a 29% 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 211. 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
Perquimans County	1,598	579	36.2	1,244	349	28.1
<i>Regional Average</i>	2,256	773	34.6	1,716	464	26.5
Pamlico County	1,480	812	54.9	1,131	369	32.6
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 (71).

Table 212 presents partial summaries of the screenings conducted in SY2005-2006 through SY2008-2009.

- An average of 96.0% of kindergarteners, and 97.3% of fifth graders in Perquimans 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 26.5% of kindergarteners and 4.0% of fifth graders in Perquimans 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 212. 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
Perquimans County	101.0	32.0	101.0	3.0	95.0	26.0	95.0	6.0	93.0	22.0	96.0	5.0	95.0	26.0	97.0	2.0
<i>Regional Average</i>	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
Pamlico County	70.0	24.0	71.0	2.0	76.0	23.0	63.0	0.0	73.0	11.0	74.0	3.0	69.0	18.0	71.0	1.0
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 Perquimans 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 (72).

The local management entity serving Perquimans 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 213 presents an annual summary of the number of persons in each jurisdiction served by LMEs/Area Programs from 2005 through 2010.

- In Perquimans County the number of persons served by mental health area programs fluctuated from year to year over the period cited, but rose 18% overall between 2005 and 2010.
- In Pamlico County the number of persons served by mental health area programs also fluctuated but rose by 33% overall between 2005 and 2010.
- 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 213. Persons Served by Mental Health Area Programs/Local Management Entities (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Perquimans County	395	401	374	406	416	467
<i>Regional Average</i>	758	724	730	730	733	706
Pamlico County	341	312	324	427	515	454
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 (73).

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 214 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 in every jurisdiction over the period cited. In Perquimans County, the net decrease from 2005 to 2010 was 81%; in Pamlico County the net decrease was 94%, and statewide it was 61%.

Table 214. Persons Served in NC State Psychiatric Hospitals (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Perquimans County	26	20	15	18	9	5
<i>Regional Average</i>	41	39	33	18	13	9
Pamlico County	31	18	19	5	4	2
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 215 presents ED admissions of Perquimans 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 431 ED visits by Perquimans County residents to area EDs with complaints diagnosed as mental or behavioral disorders. The total computes to an annual average of 144 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 29% of all the visits listed in the table.

Table 215. Emergency Department Admissions of Perquimans 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	0	2	4	6
292	Drug-induced mental disorders	3	6	7	16
295	Schizophrenic disorders	10	12	11	33
296	Episodic mood disorders (including bipolar disorder)	15	18	19	52
298	Other nonorganic and unspecified mood disorders	10	8	15	33
300	Anxiety, dissociative and somatoform disorders	26	60	39	125
303	Alcohol dependence syndrome	6	1	2	9
304	Drug dependency	5	2	9	19
305	Non-dependent abuse of drugs	25	34	39	98
311	Depressive disorder, not elsewhere classified	17	12	14	43
Total		117	155	159	431

Developmental Disabilities Service Utilization

According to NC MH/DD/SAS, *developmental disability* means a severe, chronic disability of a person which:

- is attributable to a mental or physical impairment or combination of mental and physical impairments;
- is manifested before the person attains age 22, unless the disability is caused by a traumatic head injury and is manifested after age 22;
- is likely to continue indefinitely;
- 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
- 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
- when applied to children from birth through four years of age, may be evidenced as a developmental delay (74).

The NC Council on Developmental Disabilities estimated that as of January, 2011 there were over 167,000 persons in NC with a developmental disability (75).

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 216 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 other than falling then rising again.
- At the state level, the number of persons served decreased by 37% between 2005 and 2010.

Table 216. Persons Served in NC State Developmental Centers (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Perquimans County	3	3	1	0	3	3
<i>Regional Average</i>	6	6	1	1	6	6
Pamlico County	6	6	0	0	6	6
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 217 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 relatively 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 217. Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2005-2010)

Location	Number of Persons Served					
	2005	2006	2007	2008	2009	2010
Perquimans County	15	13	8	12	6	4
<i>Regional Average</i>	11	14	9	19	21	13
Pamlico County	12	16	10	8	11	13
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 215, cited previously, presented 2010-2012 ED admissions of Perquimans 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 six total admissions under ICD-9 Code 291, Alcohol-induced mental disorders, and 16 total admissions under ICD-9 Code 292, Drug-induced mental disorders.
- There also were nine total admissions under ICD-9 Code 303, Alcohol dependence syndrome, and 16 total admissions under ICD-9 Code 304, Drug dependence.
- There were 98 total admissions under ICD-9 Code 305, Non-dependent use of drugs.

Substance Use and Abuse among Youth

Tobacco

While there is no Perquimans 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. Perquimans County is included among the 37 counties in the Branch's Eastern/Coastal Region (Region 1).

Table 218 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 218. 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 Perquimans 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 (76).

According to EPA data, in 2011 there were no facilities in Perquimans County reporting TRI releases of any kind to any destination (77).

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 (78).

As of July 21, 2012, SDWIS listed four active water systems in Perquimans County. Three were *community water systems* that together served 11,649 people. 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.

SDWIS also listed one non-transient, non-community water system in Perquimans County that served a total of 355 people. These are water systems that serve the same people, but not year-round (e.g. schools that have their own water system).

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 219 lists the active water systems in Perquimans County as of July 12, 2012. The table also includes any *health-based* violations for the period from 2000 through 2011.

- None of the Perquimans County water systems had health violations during the period cited.

**Table 219. Active Water Systems in Perquimans County
(As of July 12, 2012)**

Type of Water System	Total Population Served	Primary Water Source Type	Health Violations 2000-2011
Community Water Systems			
Hertford Water System	2,400	Groundwater	None
Holiday Island Water System	249	Purchased groundwater	None
Perquimans County Water System	9,000	Groundwater	None
Total	11,649		
Non-Transient, Non-Community Water Systems			
Harvey Point Defense Activity	355	Groundwater	None
Total	355		

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/Perquimans 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 220 summarizes ARHS/Perquimans County Health Department activities related to wells and well testing for 2008 through 2010 as catalogued by the state’s Environmental Health Section.

Table 220. Perquimans County Health Department On-Site Water Protection Activities: Well Water FY2008 through FY2010

Activity	2008	2009	2010
Well Sites Evaluated	N/A	N/A	6
Well Site Consultative Visits	N/A	N/A	N/A
Well Construction Permits Issued			
<i>New</i>	2	N/A	3
<i>Repair</i>	N/A	N/A	3
Bacteriological Samples Collected	N/A	N/A	6
Other Samples Collected	N/A	N/A	6

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/progimprovtteam.htm.

Wastewater Systems

Municipalities operate jurisdiction-wide wastewater treatment systems. It appears that Perquimans County does not operate a wastewater treatment system, but one town, Hertford, does, according to NC DENR (79).

Town of Hertford Central Wastewater System

The Town of Hertford Public Works Department operates a municipal water treatment plant and sewage treatment plant. Water and sewer service is available to all properties within the Town’s corporate limits and to some areas outside the corporate limits (80).

The ARHS/Perquimans 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 221 summarizes ARHS/Perquimans County Health Department activities related to septic systems for 2008 through 2010 as catalogued by the state’s On-Site Water Protection Branch.

Table 221. Perquimans County Health Department 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)	81	N/A	62
Operation Permits Issued	64	N/A	47
Improvement Permits Issued - Repair or replace malfunctioning system	2	N/A	N/A
Construction Authorizations			
<i>New, Revision or Relocation</i>	62	N/A	48
<i>Repair/Replacement of Malfunctioning System</i>	4	N/A	4
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 222 lists the NPDES-permitted dischargers in Perquimans County and the destinations and permitted volumes of their discharges. All permitted dischargers are municipality services; two are water treatment plants and one is a wastewater treatment plant.

Table 222. National Pollutant Discharge Elimination System (NPDES) Permitted Dischargers (November, 2012)

Owner	Facility	Type	Discharge Destination	Permitted Flow (Gal/Day)
Perquimans County	Bethel WTP	Water Treatment Plant	Bethel Creek	Not limited
Town of Hertford	Hertford WWTP	Wastewater Treatment Plant, Municipal, <1MGD	Perquimans River	700,000
Perquimans County	Winfall WTP	Water Treatment Plant	Mill Creek	35,000

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 223 presents figures summarizing tonnage of solid waste disposed in Perquimans County, the ARHS Region, Pamlico County, and NC for the period FY2006-07 through FY2010-11.

- In FY2010-11, Perquimans County managed 10,675 tons of municipal solid waste (MSW) for a rate of 0.79 tons per capita. This figure represented an increase of 12% from the per capita rate for FY1991-92 (the period customarily used for the base rate).
- During the same FY2010-11 period the overall state per capita solid waste management rate was 7% less than the FY1991-92 base per capita rate.
- The per capita rate in Pamlico County decreased 4% between the base year and FY2010-11.

**Table 223. 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			
Perquimans County	7,519.55	12,560.95	10,818.80	8,035.82	10,797.22	10,674.64	0.73	0.79	8
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
Pamlico County	8,541.24	11,789.92	11,612.87	10,285.35	9,591.29	9,445.25	0.75	0.72	-4
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 224 presents the FY2010-11 County Waste Disposal Report for Perquimans County.

- All of Perquimans County's solid waste is transferred to or transported directly to landfills *outside* the county.

**Table 224. County Waste Disposal Report, Perquimans County
(FY2010-11)**

Location	Facility Name	Facility Type	Tons Received	Tons Transferred
Perquimans County	East Carolina Regional Landfill	Municipal Solid Waste Landfill	18,580.74	0.00
	Perquimans-Chowan-Gates Transfer Station	Municipal Solid Waste Transfer Station	6,611.38	6,611.38

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=DLE-38490.pdf.

Municipal Solid Waste Management

Solid waste management in Perquimans County is the responsibility of Albemarle Regional Solid Waste Management Authority (ARSWMA), a subsidiary of Albemarle Regional Health Services. ARSWMA is a county-level legal entity serving the Counties of Perquimans, Chowan, Gates, Dare, Currituck, Hyde, and Tyrrell. This area currently has approximately 107,000 permanent residents and several hundred thousand visitors each year. Through a 26-year

contract signed in 2009 with Republic Services of NC, LLC, the Authority aims to provide cost-effective and efficient solid waste disposal for the region.

All municipal wastes and most of the construction and demolition debris from the Authority's members are landfilled in the East Carolina Environmental Landfill in Bertie County (owned by Republic Services of NC). The waste is primarily sent there through the three transfer stations located in Dare County, Currituck County, and Perquimans County. However, the towns and counties affiliated with the Authority operate their own solid waste and recycling *collection* programs.

Perquimans County Solid Waste and Recycling Program

Perquimans County has five convenience sites to which people may bring solid waste: New Hope, Highway 17 N, Highway 17 S, Hertford, and Belvidere. These convenience sites accept recyclables, yard waste, scrap metals, appliances, furnishings, household waste, motor oil, oil filters, and antifreeze. Tires are *not* accepted and must be returned to the dealer or taken to the Perquimans-Chowan-Gates (PCG) Landfill, located in Belvidere (Perquimans County) (81). Large quantities of waste and all industrial waste must be taken to the PCG Landfill, where charges may apply for some types of materials. In addition, each county has swap shops for residents to drop off usable household goods. Residents may pick up a limit of three items per family per week at no charge; items are not for resale (82).

Town of Hertford

The Town of Hertford provides garbage collection to its residents through a contractor, Waste Industries. Garbage is collected in a 90-gallon roll-out container provided by the Town. The collection is once per week. The following items are not accepted in the containers: yard waste, paint or chemicals, pesticides or insecticides, tires, motor oil and fluorescent bulbs. The contractor and Town will not pick up any items left by the curb except for yard waste.

The Town of Hertford also provides curbside recycling for all businesses and residences. The Town will provide upon request a 60-gallon roll-out recycling can. Recyclables are collected once per week. All recyclables can be commingled in the recycling container. Approved recyclables are: newspaper, all office paper, cardboard, glass (all colors), aluminum cans, steel cans, and some plastic containers.

The Town of Hertford collects yard waste placed at the curb line of the property. There is no set day or time that yard waste is collected but the Town attempts to collect throughout town at least once per week. The Town reserves the right to charge landowners for volumes of yard waste that exceeds "normal volumes" (80).

Town of Winfall

The Town of Winfall sponsors municipal solid waste collection once a week and curbside recycling once every other week.

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 225 lists the hazardous waste generator in Perquimans County, which generates a small quantity of hazardous waste.

**Table 225. Hazardous Waste Generators, Perquimans County
(Accessed April, 2013)**

Location	Generator Name	Location	Type of Business (NAICS Code/Description)	Type of Generator
Perquimans County	Harvey Point Defense Testing Activity	Hertford	National Security	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 (83).

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 226 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 cases.

**Table 226. Blood Lead Assessment Results
(2006-2010)**

Location	Year	Ages 1 and 2					Ages 6 Months to 6 Years		
		Target Population	No. Tested	% Tested	No. \geq 10 μ g/dL	% \geq 10 μ g/dL	No. Tested	Confirmed 10-19 μ g/dL	Confirmed \geq 20 μ g/dL
Perquimans County	2006	255	167	65.5	3	1.8	233	2	1
	2007	264	179	67.8	3	1.7	242	3	N/A
	2008	263	172	65.4	1	0.6	225	N/A	N/A
	2009	277	169	61.0	1	0.6	200	N/A	N/A
	2010	266	173	65.0	N/A	0.0	213	N/A	N/A
Pamlico County	2006	234	165	70.5	2	1.2	278	N/A	N/A
	2007	229	147	64.2	1	0.7	237	N/A	N/A
	2008	218	162	74.3	1	0.6	271	N/A	N/A
	2009	212	155	73.1	N/A	0.0	241	N/A	N/A
	2010	223	155	69.5	N/A	0.0	208	N/A	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 Perquimans County residents presented at the emergency departments of the four hospitals in the region.

Table 227 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 227. 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

¹2012 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 (84).

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 228 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 in cats and one was in a dog. Statewide in 2012 48% of all rabies cases were in raccoons.

Table 228. 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
<i>Regional Total</i>	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 Perquimans County

The Perquimans County Animal Control Officer enforces the county and state ordinances, laws and resolutions related to animals. The Officer also answers citizen requests to pick up stray, sick, nuisance or confined animals, and responds and takes reports of animal bites, injured animals, animals displaying aggressive behavior and rabies suspects. The Animal Control Office has animal traps available to be checked out. Traps will not be set when the weather is 32 degrees or less or in bad rainy weather. Traps will not be set over weekends (85).

Animal Shelters Serving Perquimans County

The Tri-County Animal Shelter, serving Chowan, Gates and Perquimans counties, is located in Tyner. The shelter is open for adoptions Monday through Friday from 1-5 PM, and Saturdays from 10 AM to 1 PM (86).

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 229 presents data on the availability of grocery stores.

- The number of grocery stores in Perquimans County decreased from 3 to 2 between 2007 and 2009.
- Approximately 250 Perquimans County households (~4%) have no car and therefore low access to grocery stores.

**Table 229. 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
<i>Regional Total</i>	39	n/a	33	n/a	n/a	n/a	2,349	n/a	6,632	n/a
<i>Regional Average</i>	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 230 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. None were located in Perquimans County.

Table 230. 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
<i>Regional Total</i>	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 231 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.
- Perquimans County had 3 fast food restaurants in both 2007 and 2009. In 2009 there was one more fast food restaurant than grocery stores in the county.

Table 231. 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
<i>Regional Total</i>	77	n/a	74	n/a	n/a	n/a
<i>Regional Average</i>	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 232 presents data on the availability of recreational and fitness facilities.

- There was one recreation/fitness facility in Perquimans County in both 2007 and 2009. A more recent listing of recreational facilities was provided earlier in this document.

Table 232. 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
<i>Regional Total</i>	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 Counties. Healthy Carolinians of the Albemarle 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

Perquimans County

Hello, I am _____ and this is _____ representing the Perquimans 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 Perquimans County, North Carolina. The Perquimans County Health Department, Healthy Carolinians of the Albemarle and Vidant Chowan Hospital will use the results of this survey to help develop plans for addressing the major health and community issues in Perquimans 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:

- Perquimans Health Dept. → 252-426-2100

Additionally, the numbers for the local law enforcement are provided here:

- Perquimans County Sheriff's Office → 252-426-1939

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 Perquimans 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 Perquimans 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 Perquimans County. (Think about health care options, access, cost, availability, quality, etc.)	2.4%	31.9%	<u>44.3%</u>	10.2%
Question 2 Perquimans 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.)	0.2%	7.3%	<u>66.8%</u>	21.4%
Question 3 Perquimans 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.)	0%	13.6%	<u>60.3%</u>	25.7%
Question 4 There are plenty of ways to earn a living in Perquimans County. (Think about job options and quality of jobs, job training/higher education opportunities, etc.)	<u>41.0%</u>	39.1%	12.1%	7.6%
Question 5 Perquimans County is a safe place to live. (Think about safety at home, in the workplace, in schools, at playgrounds, parks, shopping centers, etc.)	0.7%	8.4%	<u>68.9%</u>	22.1%
Question 6 There is plenty of support for individuals and families during times of stress and need in Perquimans County. (Examples include neighbors, support groups, faith community outreach, agencies, organizations, etc.)	4.3%	17.1%	<u>55.6%</u>	15.2%
Question 7 Perquimans County has clean air.	0%	12.7%	<u>52.2%</u>	35.1%
Question 8 Perquimans County has clean water.	1.2%	25.6%	<u>56.0%</u>	9.9%

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 Perquimans 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 Perquimans 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 | m. Aging Problems | q. Substance Abuse |
| b. Infant Death | (vision/hearing loss,
arthritis, etc.) | (ex: drugs and alcohol) |
| c. Asthma | n. Caring for Family | r. Suicide |
| d. Cancer | Members with Special | s. Mental Health |
| e. Diabetes | Needs/ Disabilities | (depression, anxiety,
mood disorders) |
| f. Heart Disease | o. Teen Pregnancy | t. Domestic Violence |
| g. Stroke | and Sexually | u. Crime |
| h. Alzheimer' | Transmitted Diseases, | v. Rape/ Sexual Abuse |
| i. Motor Vehicle Accidents | including HIV/AIDS | w. Gun Related Injuries |
| j. Tobacco Use | p. Infectious/Contagious | x. Other: _____ |
| k. Child Care/Parenting | Diseases (TB,
pneumonia, etc.) | y. None |
| l. Elder Care | | |

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 Perquimans 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 | i. Using child safety seats | q. Substance Abuse
(ex: drugs and alcohol) |
| b. Lack of Exercise | j. Using seat belts | r. Suicide |
| c. Going to a dentist for
check-ups | k. Driving Safely | s. Mental Health
(depression, anxiety,
mood disorders) |
| d. Going to the doctor for
yearly check-ups and
screenings | l. Driving Under the
Influence | t. Domestic Violence |
| e. Taking prescription
medications | m. Smoking | u. Crime |
| f. Receiving Prenatal Care | n. Breathing Secondhand
Smoke | v. Rape/ Sexual Abuse |
| g. Getting flu shots and
other vaccines | o. Child care/ parenting | w. Gun Related Injuries |
| h. Preparing for an
emergency/disaster | p. Having unsafe sex | x. Other: _____ |
| | | y. None |

Question 11

Using this list, choose the five (5) most important “community social issues” in Perquimans 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 (includes a tie):

- | | |
|---|---|
| a. Access to prescription drugs | j. Lack of recreational facilities |
| b. Disaster preparedness/bioterrorism | k. Lack of health care providers |
| c. Homelessness | l. Lack of transportation options |
| d. Inadequate/unaffordable housing | m. Neglect and abuse (of a child, a spouse,
the elderly, etc.) |
| e. Lack of affordable health insurance/health
care | n. Pollution (air, water, land) |
| f. Lack of education/dropping out of school | o. Poverty |
| g. Lack of healthy food choices | p. Racism |
| h. Lack of mental health services | q. Underemployment/lack of well-paying jobs |
| i. Lack of services for people with cultural or
language differences | 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 Perquimans 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: **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.)

- 34.4% Health insurance *my* employer provides
- 12.0% Health insurance *my spouse's* employer provides
- 0% Health insurance *my school* provides
- 0% Health insurance *my parent or my parent's* employer provides
- 16.2% Health insurance I bought for myself
- 13.8% Medicaid
- 43.5%** Medicare
- 0% Veteran's Administration benefits

8.2% Other: _____
13.4% 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?

12.6% Yes **87.4%** No 0% No Response

Question 16

What type of medical provider(s) do you visit when you are sick?

(Choose all answers that apply.)

<u>91.8%</u> Doctor's office	<u>0%</u> Company nurse
<u>3.2%</u> Health department	<u>0%</u> Community or Rural Health Center
<u>2.2%</u> Hospital clinic	<u>17.0%</u> Urgent Care Center
<u>12.6%</u> Hospital emergency room	<u>0%</u> Other: _____
<u>0%</u> Student Health Services	<u>0.2%</u> No Response

Question 17

In what cities are the medical providers you visit located?

(Choose all answers that apply.)

<u>0%</u> Ahoskie	<u>0%</u> Franklin	<u>0%</u> Suffolk
<u>10.7%</u> Chesapeake	<u>0%</u> Gatesville	<u>6.2%</u> Virginia Beach
<u>1.7%</u> Dare County	<u>2.4%</u> Greenville	<u>0%</u> Williamston
<u>26.6%</u> Edenton	<u>49.4%</u> Hertford	<u>0%</u> Windsor
<u>43.7%</u> Elizabeth City	<u>6.3%</u> Norfolk	<u>4.2%</u> Other: _____
<u>2.4%</u> Baltimore	<u>0.2%</u> Chapel Hill	<u>0.4%</u> New York
<u>1.1%</u> Winfall		

Question 18

Where do you usually get advice on your health?

(Choose all answers that apply.)

<u>83.9%</u> Doctor's office	<u>3.4%</u> Urgent Care Center
<u>3.8%</u> Health department	<u>14.2%</u> Family
<u>1.4%</u> Hospital clinic	<u>4.5%</u> Friends
<u>1.7%</u> Hospital emergency room	<u>2.9%</u> Media (television, news, radio, magazine)
<u>0%</u> Student Health Services	<u>20.2%</u> Internet or other computer-based info
<u>0%</u> Company nurse	<u>0.9%</u> Other: _____
<u>0.5%</u> Everybody	<u>0.4%</u> Pharmacy
<u>0%</u> Community or Rural Health Center	
<u>0%</u> No Response	

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.*

- 84.3% Within the past 12 months
- 8.2% 1-2 years ago
- 3.5% 3-5 years ago
- 2.6% More than 5 years ago
- 0.2% I have never had a routine or “well” medical checkup
- 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.*

- 56.3% Within the past 12 months
- 15.9% 1-2 years ago
- 6.9% 3-5 years ago
- 14.9% More than 5 years ago
- 1.1% I have never had a routine or “well” dental checkup
- 3.7% Don’t Know
- 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.)

- 0% Children’s Developmental Services Agency/Developmental Evaluation Center
- 5.7% Counselor or Therapist in private practice
- 40.1% Doctor
- 1.0% Emergency Room
- 0% Employee Assistance Program
- 19.8% Local Mental Health Facility
- 16.2% Minister/Pastor
- 0.5% School Counselor
- 0% Vocational Rehabilitation/Independent Living
- 13.5% I don’t know
- 3.0% Other: _____
- 0.2% No Response

Question 22

How would you rate your day-to-day level of stress?

- 11.0% High
- 37.3% Moderate
- 51.7% 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?

5.2% Always 4.8% Usually 17.8% Sometimes 17.6% Rarely **54.6%** Never

Question 24

On how many of the past 7 days did you drink alcohol of any kind? (Beer, Wine, Spirits)

<u>9.1%</u> 1 day	<u>4.9%</u> 6 days
<u>0.7%</u> 2 days	<u>12.4%</u> 7 days
<u>5.5%</u> 3 days	<u>40.5%</u> I never drink alcohol
<u>0%</u> 4 days	<u>21.6%</u> I didn't drink alcohol on any of the past 7 days
<u>5.4%</u> 5 days	<u>0%</u> No Response

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?

<u>35.7%</u> 0 times	<u>0%</u> 4 times
<u>0.5%</u> 1 time	<u>0%</u> 7 Times
<u>0.5%</u> 2 times	<u>0%</u> No Response
<u>1.3%</u> 3 times	

Question 26

Do you smoke cigarettes?

21.6% Yes
37.1% I have never smoked cigarettes
36.0% 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
17.0% Between half a pack and one (1) pack per day
0.4% More than one (1) pack a day
0.4% Two (2) packs a day

Question 28

Are you regularly exposed to second-hand smoke from others who smoke?

16.9% Yes **83.1%** 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.)

<u>2.2%</u>	Public Places	<u>1.0%</u>	Car
<u>13.3%</u>	Home	<u>0%</u>	Hospital
<u>1.7%</u>	Workplaces	<u>0%</u>	Other
<u>0%</u>	School (public, community college, university)		
<u>0.2%</u>	No Response		

Question 30

How often do you currently use smokeless tobacco (chewing tobacco, snuff, Snus®, “dip”)?

93.1% Not at all 1.9% On some days 2.2% Every day

Question 31

Are you in support of establishing all county property including public parks and recreational facilities as smoke free?

79.0% Yes 20.6% No 0.4% 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?

13.7% None
3.9% Less than once a week
2.8% Once a week
30.0% 2-3 times a week
17.9% 4-6 times a week
31.7% Daily

Question 33

If you answered “none” to Q 31, why don’t you engage in physical activity?

(Choose all answers that apply.)

0.7% My job is physical or hard labor
0.6% I don’t have enough time for physical activity
0.7% I’m too tired for physical activity
5.8% 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)
5.2% Physical activity is not important to me
0% Other: _____
0% No Response

Question 34

Which of the following physical activity resources would you utilize?

(Choose all answers that apply.)

- 15.6% Park/Playground
- 14.8% School
- 27.4% Church
- 15.7% Community Center
- 10.9% Senior Center
- 30.0% Parks & Recreation Facility
- 21.3% Gyms
- 40.1%** Walking Trail
- 20.0% Nature Trail
- 11.2% Bike Trail
- 9.8% Canoeing
- 5.8% Kayaking
- 35.9% Walkable Communities – i.e. areas measured, deemed safe to walk, etc.
- 10.0% No Response

Question 35

Do you know of any schools that allow the public to use their recreational facilities after hours?

- 17.8% Yes
- 82.2%** No
- 0% No Response

Question 36

How often do you visit county parks and recreation facilities?

- 0% Daily
- 17.5% Weekly
- 2.4% Monthly
- 32.8%** Occasionally
- 24.1% Rarely
- 23.2% 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.)

- 0.5% No lighting
- 0.5% No bathrooms
- 0% Unclean
- 2.5% Unsafe
- 0% No drinking fountains
- 0% Not handicap accessible
- 0% Lack of shade
- 0.2% Lack of children's play equipment
- 1.1% Lack of fields or courts for sports
- 0% Lack of walking paths/tracks

- 0% Lack of biking paths
- 0% Lack of trashcans/pet waste disposal
- 5.4% Lack of transportation
- 0% Cost
- 32.2% Nothing offered of interest to me
- 35.5%** Other: _____
- 9.6% No Response

Question 38

Not counting juice, how many servings of fruit do you consume in an average day?

- | | |
|-------------------------------|-------------------------|
| <u>7.0%</u> None | <u>2.4%</u> 5 servings |
| <u>41.3%</u> 1 serving | <u>0%</u> 7 servings |
| <u>27.4%</u> 2 servings | <u>5.0%</u> Don't know |
| <u>11.8%</u> 3 servings | <u>0.2%</u> No response |
| <u>4.9%</u> 4 servings | |

Question 39

Not counting potatoes and salad, how many servings of vegetables do you consume in an average day?

- | | |
|-------------------------------|--------------------------|
| <u>3.1%</u> None | <u>2.8%</u> 5 servings |
| <u>41.0%</u> 1 serving | <u>0%</u> 6 servings |
| <u>31.9%</u> 2 servings | <u>0%</u> 8 servings |
| <u>12.2%</u> 3 servings | <u>0%</u> Don't know |
| <u>8.7%</u> 4 servings | <u>0.2 %</u> No response |

Question 40

Are you within 10 miles of a grocery store, convenience store, or dollar store?

- 88.4%** Yes 9.7% No 1.1% Don't Know 0% No Response

Question 41

Are fresh fruits and vegetables readily available at these stores?

- 79.8%** Yes 9.2% No 0% Don't Know 0% No Response

Question 42

Are you within ten miles of a farmers market or roadside, produce stand?

- 84.7%** Yes 14.2% No 1.0% Don't know 0.2% No Response

Question 43

If yes, during the months open how often do you visits?

- 1.1% Daily
- 24.2%** Weekly
- 7.4% Monthly
- 14.3% Occasionally
- 14.7% Rarely

22.5% Never
0.6% No Response

Question 44

What are the primary reasons you do not visit or do not visit regularly?

(Choose all answers that apply.)

2.4% Lack of transportation
4.8% Too expensive
0.5% I do not eat fruits and vegetables
4.6% I do not know the locations and hours of operation
0.9% I am working during hours of operation
0% Does not accept EBT or WIC
18.4% I have my own garden
16.3% Other: _____
0.2% Active around the house
0.7% Active in other ways
1.1% Caring for mother
0.5% Lazy
13.1% No Response

Question 45

On average, how many meals a week do you eat out?

Mean: 2.7 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	<u>19.7%</u> Yes	<u>80.3%</u> No
Depression	<u>11.1%</u> Yes	<u>88.9%</u> No
Diabetes	<u>29.6%</u> Yes	<u>70.4%</u> No
High blood pressure	<u>46.7%</u> Yes	<u>53.3%</u> No
High cholesterol	<u>47.6%</u> Yes	<u>52.4%</u> No
Mental Illness	<u>3.1%</u> Yes	<u>96.9%</u> No
Overweight/obesity	<u>28.1%</u> Yes	<u>71.9%</u> No
Heart Disease	<u>19.5%</u> Yes	<u>80.5%</u> No
Cancer	<u>10.0%</u> Yes	<u>90.0%</u> No
No Response	<u>19.3%</u> Yes	<u>80.7%</u> No

Question 47

What year were you born? Mean Age: 59.8

Age Groups:

<u>0%</u> <=18	<u>25.4%</u> >48-58	
<u>1.7%</u> >18-28	<u>31.0%</u> >58-68	
<u>5.6%</u> >28-38	<u>22.5%</u> >68-78	
<u>7.9%</u> >38-48	<u>6.2%</u> >78-88	<u>0%</u> >88-98

Question 48

Are you male or female? 38.7% Male 61.3% Female 0% No Response

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?

28.7% Yes 6.3% 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.)*

- 0.4% Lack of Information (Didn’t know about/Couldn’t locate information about it).
- 0.2% 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).
- 0.4% Language or Cultural Barrier (This service was not sensitive to my language or cultural needs).
- 0% Lack of Transportation (Don’t have access to an automobile or public transportation; don’t know anyone who could give me a ride).
- 1.2% Instructed by a health professional that an annual prostate exam was not necessary.
- 4.2% Other
- 0% Don’t Know
- 0% No Response

Question 51

How long has it been since your last prostate exam?

- 24.1% Within the past 12 months
- 5.3% 1-2 years ago
- 3.7% 3-5 years ago
- 0.6% More than 5 years ago
- 0% I don’t know/don’t remember
- 0.4% I have never had a prostate exam
- 1.0% No Response

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?

44.8% Yes 12.2% No 0.7% 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% Lack of Information (Didn't know about/Couldn't locate information about it).
- 5.3% 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).
- 0% Instructed by a health professional that an annual mammogram was not necessary .
- 6.5%** Other
- 0.5% Don't Know
- 0% No Response

Question 54

How long has it been since your last mammogram?

- 40.7%** Within the past 12 months
- 12.0% 1-2 years ago
- 0% 3-5 years ago
- 0.5% More than 5 years ago
- 1.1% I don't know/don't remember
- 2.2% I have never had a mammogram
- 0.5% No Response

Question 55

Do you get a Pap test at least every 1-3 years? **51.5%** Yes 12.5% No 1.0% 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)
- 0.5% 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.)
- 5.1%** Instructed by a health professional that a pap test every 1-3 years was not necessary .
- 3.3% Other
- 0% Don't Know
- 0% No Response

Question 57

How long has it been since your last Pap test?

- 27.6% Within the past 12 months
- 23.7% 1-2 years ago
- 3.3% 3-5 years ago
- 3.3% More than 5 years ago
- 1.1% I don't know/don't remember
- 0% I have never had a pap test
- 1.3% No Response

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?

- 51.1% Yes
- 28.3% No
- 0.8% Under age 50
- 0% 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.)

- 16.3% Yes
- 83.7% No
- 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.)*

- | | |
|---|--|
| <u>6.6%</u> Nutrition | <u>5.2%</u> Gang violence |
| <u>2.3%</u> Physical Activity | <u>7.4%</u> Reckless driving/speeding |
| <u>6.8%</u> Sex | <u>1.0%</u> Eating disorder (e.g. anorexia or bulimia) |
| <u>3.6%</u> Tobacco | <u>0.9%</u> Mental Health issues (depression, anxiety) |
| <u>0%</u> Asthma Mgmt | <u>0.4%</u> Suicide Prevention |
| <u>4.0%</u> Diabetes Mgmt | <u>6.9%</u> Substance Abuse (alcohol/drugs) |
| <u>1.2%</u> Overweight/Obesity | <u>6.8%</u> STDs including HIV |
| <u>0.4%</u> First Aid/CPR | <u>1.5%</u> Other: _____ |
| <u>1.0%</u> Prevention | <u>0.5%</u> Self-Esteem |
| <u>1.0%</u> 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.)

<u>40.2%</u> Yes, smoke detectors only	<u>0%</u> Yes, carbon monoxide detectors only
<u>54.9%</u> Yes, both	<u>5.0%</u> No
<u>0%</u> Don't Know	<u>0%</u> No Response

Question 62

Does your household have a Family Emergency Plan?

56.1% Yes 40.0% No 3.9% Don't Know 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?

17.5% Yes 82.5% No 0% 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.

<u>29.3%</u> No	<u>11.5%</u> 2 weeks
<u>16.4%</u> 3 days	<u>13.0%</u> More than 2 weeks
<u>29.7%</u> 1 Week	<u>0%</u> Don't know
<u>0%</u> No Response	

Question 65

What would be your main way of getting information from authorities in a large-scale disaster or emergency?

<u>22.0%</u> Television	<u>4.3%</u> Text message (emergency alert system)
<u>55.4%</u> Radio	<u>2.4%</u> Telephone
<u>8.9%</u> Internet	<u>0%</u> Social networking site (i.e. Facebook)
<u>0%</u> Print media (ex: newspaper)	<u>0%</u> Don't know
<u>4.8%</u> Cell phone	<u>0%</u> No Response
<u>1.2%</u> Neighbors	<u>6.5%</u> Other: _____
<u>1.7%</u> SERT Team	
<u>1.7%</u> 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?

64.3% Yes 17.9% No 17.8% Don't know 0% No Answer

Question 67

What would be the main reason you might not evacuate if asked to do so?

(Choose only one answer.)

0.5% Lack of transportation
0.5% Lack of trust in public officials
11.5% Concern about leaving property behind
4.1% Concern about personal safety
4.3% Concern about family safety
11.6% Concern about leaving pets
0% Concern about traffic jams and inability to get out
1.0% Can't afford to evacuate (gas, hotel stay, eating out)
15.6% Other: _____
10.0% Don't know
8.6% No Response

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 Perquimans County?

21.4% Yes 74.9% No 3.7% No Response

Question 69

What is your race or ethnicity? *(Choose only one answer.)*

19.7% African American/Black 78.8% Caucasian/White
0% Asian/Pacific Islander 1.1% Native American
0% Hispanic/Latino 0.4% Other: _____
0.4% Mixed 0% No Response

Question 70

What is your marital status?

75.7% Married 4.7% Separated 5.5% Never married
5.6% Widowed 6.0% Divorced 0% Other: _____
0% No Response

Question 71

What is the highest education level you have completed?

(Choose only one answer.)

- 5.3% Less than 9th grade
- 14.0% 9th-12th grade, no diploma
- 24.1% High school graduate (or GED/equivalent)
- 7.3% Associate's Degree or Vocational Training
- 36.5%** Some college (no degree)
- 7.1% Bachelor's degree
- 5.7% Graduate or professional degree
- 0% Other: _____

Question 72

What is your employment status?

(Choose all answers that apply.)

- | | |
|---------------------------------|---------------------------------------|
| <u>33.0%</u> Employed full-time | <u>11.3%</u> Disabled; unable to work |
| <u>0%</u> Employed part-time | <u>0.0%</u> Student |
| <u>6.9%</u> Unemployed | <u>1.5%</u> Homemaker |
| <u>48.8%</u> Retired | <u>0%</u> 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.)*

- 11.7% Less than \$20,000
- 16.8% \$20,000 to \$29,999
- 12.1% \$30,000 to \$49,999
- 11.9% \$50,000 to \$74,999
- 12.2% \$75,000 to \$100,000
- 5.9% Over \$100,000
- 2.8% Don't Know
- 22.9%** No Response

Question 74

How many individuals live in your household? Mean: 2.4

Question 75

Do you have access to the internet?

- | | | | |
|-------------------------|-----------------|-------------------------|----------------------|
| <u>81.7%</u> Yes | <u>17.8%</u> No | <u>0.5%</u> No Response | <u>0%</u> Don't Know |
|-------------------------|-----------------|-------------------------|----------------------|

THE END!

Thank you very much for completing the Community Health Survey!

Perquimans 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 14 stakeholders and four 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 public health services; serving mostly females ages 14-50 and a few young males for family planning services, Child Health Clinic serving children ages 2 months to teenagers, STD clinic serving both young males and females ages 16-30s, Adult Health Clinic serving families ages 20s-60s. Majority of clients are African American

-Provides food and grocery items to more than 130 501c3 and faith-based partners that help hungry men, women, and children; serving primarily low-income, disabled, and working poor from all demographics

-Promoting tourism in Perquimans County; serving all ages, races, and gender

-Local government consulting; serving; cities, town, and counties

2. In the past 5 years, have there been any changes in the composition of the people who use your services, if so please describe.

-Yes, serving a few more Hispanics

-The composition of people seeking emergency food has grown by 48% over the past five years due to the poor economic climate.

3. What do you think are the barriers residents encounter in accessing your services?

-May not have computer access to website information or visit sites where our printed literature is available

-Transportation is a barrier for rural NENC residents followed by access. Emergency food programs tend to serve when people are traditionally working.

-Stigma that our services are for poverty clients; some transportation issues

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)?

-Access the language line as needed for non-English speaking clients; two nightly immunization clinics are each month

-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 Service, and social services.

-We had added symbol to our literature so people can use smart phone to access information about the county.

5. Is there anything else you would like to share about your organization?

-We are always looking for opportunities to collaborate with community.

-Very limited budget based on occupancy tax revenue. A great need for small hotel-impact fees would go a long way.

6. What services/programs are needed that are not currently available?

-Referral resources for financial assistance for colonoscopy

-Shopping facilities: clothing and grocery

-We need a shelter for the homeless; we need job training services; we need a 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

-A quality senior long-term care facility; more physicians including a pediatrician; a small hotel; and leisure activities for youth

7. Overall, what would you consider to be the county's greatest strength?

-People

-Our natural resources and abundance of outdoor, water, and land features; good healthcare facilities and services

-Beauty of natural surroundings of the Perquimans River

-The university and community college system seem to be focusing on the future success of NENC and its residents

8. What do you feel are the major challenges faced by the county?

-Unemployment and lack of good jobs

-Education improvement; diversification of jobs; poverty

-I think limited funding or budget crisis' cause people to think that any improvement is impossible to achieve

-Financial; no insurance for kids/adults; unemployment; no transportation services except ICPTA; lack of citizen's perspective for preventive services and wellness education

9. Looking specifically at health, what do you think are the most important health problems/health concerns in the county?

-Hypertension and stroke (early medical care at local hospitals after a stroke to help decrease long term effects); cancers and lack of interest for preventive screenings; diabetes management and preventive health prior to diagnosis; healthy eating habits; young and old exercise

-Increase in cancer; lack of affordable transportation for most of the elderly

-In a word "OBESITY"

10. What factors do you believe are causing these health problems or concerns?

-Unknown

-1 in 5 residents lives 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

-Aging population and limited number of doctors

-Lack of concern until an acute problem occurs; access to physical education programs and interventions; diet and lifestyle

11. What do you think could be done to solve or overcome these health problems or concerns?

-Education and jobs

-Supervised community exercise and sporting events year long (utilize the school gyms by the community) to include education; medical providers to reinforce preventive services at each visit; promote good eating/exercise habits in school starting in kindergarten through 12th (PE required all grades); provide sports for all children, not just varsity levels

-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	2		1	
The county is a good place to raise children.	1		2	1	
The county is a good place to grow old.	1	1	2		
There are plenty of ways to earn a living in the county.				2	2
The county is a safe place to live.		2	1	1	
There is plenty of support for individuals and families during times of stress and need in the county.		1		3	
The county has clean air.		4			
The county has clean water.		4			
Comments:					

Numbers represent the number of responses for each statement.

13. Additional thoughts or comments:

-Keep asking for feedback from the community