Discuss the management of chronic health conditions within the context of the Whole School, Whole Community, Whole Child Model.

Explore and provide examples of a multi-tiered approach to chronic condition management in the school setting.

Explain and discuss the role of the school nurse in chronic condition management through application of the nursing process.

Learning Outcomes
Overview
Chronic Health Conditions

What & Why?

“Chronic diseases are defined broadly as conditions that last one year or more and require ongoing medical attention or limit activities of daily living or both.”
[https://www.cdc.gov/chronicdisease/about/index.htm](https://www.cdc.gov/chronicdisease/about/index.htm)

‘Disease’ terminology is less often used in well settings, such as schools. We reference these as chronic health ‘conditions’. Each person’s level of health is unique, on a continuum; even those living with chronic conditions.
Investing in Student Health = Academic Success

• Health risks are related to academic outcomes

• Students with poorly managed chronic health conditions have lower academic achievement

• Chronic health conditions are strongly linked to student absenteeism

• Health interventions improve both health & learning

• Health support at home, school, and in the community impacts academics positively

(CDC, 2017b; Leroy, Wallin, & Lee, 2016; NASN, 2017b; Dilley, 2009; Engelke, Swanson, & Guttu, 2014; Engelke, Swanson, Guttu, Warren, & Lovern, 2011; Pansier & Schultz, 2015)
NC Chronic Conditions Statistics, 2018-19

- **235,580** individual students received nursing services for one or more condition (17%)
- Most common conditions:
  - Asthma
  - ADD/ADHD
  - Life threatening allergies
### Chronic Disease Management in North Carolina Schools

<table>
<thead>
<tr>
<th>Population-Based Management of Chronic Health Conditions in Schools</th>
<th>Individual Student-Centered Chronic Condition Case Management in Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>• School-based activities that are common to all students with the diagnosis</td>
<td>• Directed to individual student with condition, specific to assessed needs of student</td>
</tr>
<tr>
<td>• Driven by the professional discipline with the most applicability</td>
<td>• Driven by the school nurse, clinically oriented with family/provider integration</td>
</tr>
<tr>
<td>• May be incorporated as interventions into individual student plans</td>
<td>• Takes advantage of applicable population-based activities in schools</td>
</tr>
<tr>
<td>• General condition prevention and supportive school environment focused</td>
<td>• Empowerment of individual student/family in optimal disease control focused</td>
</tr>
</tbody>
</table>
Management of Chronic Health Conditions in Schools Within a Tiered Model

Tier Three – case management services for students with chronic health conditions

Tier Two – support services directed to students with well controlled chronic health conditions

Tier One – activities directed to prevention/management of health conditions that are provided to the entire school population
Tier One
All Students Benefit
WHOLE SCHOOL, WHOLE COMMUNITY, WHOLE CHILD

Healthy Children Learn Better
Integrating School Health Services Across the WSCC Framework

School health services staff can help students stay at school, safe and ready to learn. Here are some evidence-based strategies and promising practices for using the Whole School, Whole Community, Whole Child (WSCC) approach across the school setting to promote health services and active, healthy lifestyles for students with chronic health conditions.

https://www.cdc.gov/healthyschools/wscs/strategies.htm
Exploring Tier One

Create a healthy school climate

Directed to wellness and prevention

Done by many school staff positions

Supported by curriculum standards
North Carolina Healthful Living Standards
Related to Chronic Conditions

NC Healthful Living Standards

6.PCH.1 Understand wellness, disease prevention, and recognition of symptoms.

6.PCH.1.1 Explain the increase of incidence of disease and mortality over the last decades.

6.PCH.1.2 Differentiate between communicable and chronic diseases.

6.PCH.1.3 Recall symptoms associated with common communicable and chronic diseases.

6.PCH.1.4 Select methods of prevention based on the modes of transmission of communicable diseases.

6.PCH.1.5 Explain methods of protecting eyes and vision.

6.PCH.1.6 Summarize protective measures for ears and hearing.

6.PCH.1.7 Summarize the triggers and symptoms for asthma and strategies for controlling asthma.
A Closer Look at Tier One Activities: Asthma

Tier One: School/District Activities

Environment
1. Indoor Air Quality
2. Outdoor Air Quality

Education
1. General for School Staff
2. Asthma Education for School Nurses
3. Implement Related Healthful Living Essential Standards

Related School Wide Policies/Protocols
1. Medication Administration
2. Process for Identification of Students with Acute or Chronic Healthcare Needs/Conditions
3. Delegation to Unlicensed Assistive Personnel
4. Possession and Self-Administration of Medication
Tier Two
Some Students
Well Controlled
## Role of the School Nurse

<table>
<thead>
<tr>
<th>NASN</th>
<th>CDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interprets</td>
<td>Provides Direct Care</td>
</tr>
<tr>
<td>Explains</td>
<td>Provides Case Management</td>
</tr>
<tr>
<td>Translates</td>
<td>Advocates</td>
</tr>
<tr>
<td>Coordinates Care</td>
<td>Delegates Care</td>
</tr>
<tr>
<td>Addresses Quality Improvement</td>
<td>Advocates</td>
</tr>
</tbody>
</table>

(NASN, 2017b; CDC, 2017a; AAP, 2016)
School Nurse Case Management of Chronic Health Conditions in schools is the intentional use and documentation of the steps of the nursing process in a manner that achieves individualized health and educational goals.

Student Case Finding
Referrals, Attendance, Medical Orders, Health Room Visits, Academic Concerns

Evaluation
Individual Student Goals, Care Plan Outcomes

Nursing Assessment
Subjective Data, Objective Data

Nursing Judgment
Need for Case Management Services?

Plan of Care
SMART Goals, Align with 504/IEP, Family/Student/Provider Input, Interdisciplinary

Implementation
Carry Out Interventions, Monitor Student Progress

General School Health Program Services

YES

NO
Case Finding

Focus: Identification of all students with chronic health conditions

Sources of information:

- Nursing assessments
- Attendance reports
- Academic issue reports
- ‘Frequent flyers’
- Referrals from staff and family
- School health assessment forms
- Healthcare provider orders
Nursing Assessment

• “... an on-going process & consists of the determination of nursing care needs based upon collection & interpretation of data relevant to the health status of a client, group or community.’ Nursing judgment about student needs (nursing diagnosis), from collection & review of all related information, results from assessment & leads to the next steps.” (North Carolina Board of Nursing, 2002)

• “The first step of the nursing process in which data about the student is systematically & comprehensively collected & analyzed to formulate a nursing diagnosis or diagnoses.” (ANA & NASN, 2017, p. 87)
## Nursing Assessment

### Social Determinants

<table>
<thead>
<tr>
<th>Family structure</th>
<th>Culture</th>
<th>Health literacy</th>
<th>Social support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Transportation</td>
<td>Access to care</td>
<td>Community</td>
</tr>
</tbody>
</table>

### School Environment

<table>
<thead>
<tr>
<th>Transportation</th>
<th>Class schedule</th>
<th>School sponsored events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field trips</td>
<td>Education plans</td>
<td>Academic indicators</td>
</tr>
</tbody>
</table>

### Individual Factors

<table>
<thead>
<tr>
<th>Developmental level</th>
<th>Accommodations</th>
<th>Social/emotional status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health knowledge</td>
<td>Self-management</td>
<td>Independence</td>
</tr>
</tbody>
</table>

(U.S. Department of Health & Humans Services, 2018; NASN, 2017a)
Nursing Judgment
Need for Case Management Services?

NO

General School Health Program Services

YES
A Closer Look at Tier Two Activities: Asthma

Tier Two: Student Directed Activities with Asthma Diagnosis

Follow School Nurse Case Management Process Model

1. Case find - physician orders, staff referrals, attendance records, school information forms, student assessment
2. Assess/gather information
3. Nursing judgment on level of student need

Serve through general school health services if case management not indicated
Tier Three
A Few Students

Newly Diagnosed
or Uncontrolled
Student Case Finding
Referrals, Attendance, Medical Orders, Health Room Visits, Academic Concerns

Evaluation
Individual Student Goals, Care Plan Outcomes

Nursing Judgment
Need for Case Management Services?

YES

Implementation
Carry Out Interventions, Monitor Student Progress

Plan of Care
SMART Goals, Align with 504/IEP, Family/Student/Provider Input, Interdisciplinary
A Closer Look at Tier Three Services: Asthma

Tier Three: Intensive Student Directed Activities with New or Uncontrolled Asthma Diagnosis

Continue with School Nurse Case Management Process Model if indicated

1. Plan of care (POC/IHP)
   a. NASN practice resources
   b. North Carolina plan of care template
   c. The role of individualized healthcare plans in care coordination for students with chronic health conditions

2. Implement plan

3. Evaluate and revise for care or return student to general school health services
Plan of Care/Individualized Health Care Plan (IHP)

<table>
<thead>
<tr>
<th>Based on:</th>
<th>Key components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Nursing assessment</td>
<td>• Nursing diagnosis</td>
</tr>
<tr>
<td>• Student need</td>
<td>• Student-centered goal</td>
</tr>
<tr>
<td>• Parent/family recommendations</td>
<td>• Outcomes</td>
</tr>
<tr>
<td>• Healthcare provider orders</td>
<td>• Evidence-based interventions</td>
</tr>
<tr>
<td>• School schedule</td>
<td>• Evaluation</td>
</tr>
</tbody>
</table>

(ANA & NASN, 2017; NASN, 2017a & 2014a)
Sample Nursing Diagnosis for Asthma

- Ineffective breathing pattern
- Knowledge deficit related to asthma
- Anxiety
- Impaired social interaction
SMART Goals & Outcomes

**SPECIFIC/STRATEGIC**
What is specific about the outcome? Who? & What?

**MEASURABLE**
Is the outcome measurable? How will you know when the outcome is achieved? How?

**ATTAINABLE**
Is the outcome realistic & attainable?

**RELEVANT/REALISTIC**
Is this outcome aligned with current tasks & projects?

**TIME ORIENTED**
What is the timeline? Deadline date?
Sample SMART Goals for Asthma

Student will:
- Have no more than 3 asthma related school absences per grading period
- Provide accurate return demonstration of inhaler use 3 out of 4 tries by end of September
- Consistently identify 3 asthma triggers by the end of the grading period
- Fully participate in P.E. and recess 4 out of 5 days per week by the end of the 1st grading period
- Exhibit improved peer relationships by the end of the school year evidenced by teacher reported observations during classroom activities
Components of a Standardized Program

- School-wide preventive and support programs/measures in place
- Formal supporting policy/procedures/protocols (PPP) developed
- Implementation by all district nurses
- Inclusion of all steps of the model (nursing process)
- Actions based on student specific plan of care
- Focus on measurable student-centered goals that are closely monitored
Benefits of a Standardized Program

Students:

- Improves health and educational outcomes
- Fosters self management
- Fosters family support
- Improves healthcare coordination

Nurses and Stakeholders:

- Improves consistent compliant nursing services
- Contributes to visibility of the impact and value of an RN in the school
- Provides sharable outcome data
Barriers and Challenges

What We See

- Growth in number of districts with a standards-based program has been static in recent years
- Individual school nurses perform case management when a district program is absent
- Novice school nurses do not have skills in using the nursing process in an independent practice setting
- Time management skills are critical – control of the health room

What Nurses Report

- Initially reported ‘lack of time’
- 80% - Lack of a data collection system or plan
- 44% - Locally high nurse/student ratio
- 27% - Lack of someone to move a program forward
How Do We Get There?

- Review of programs/measures in place – assistance with resources
- Guidelines for P&P; review of drafts with suggestions for improvement
- Technical assistance (TA) with nursing staff; professional development
- Review of local program components with identification of strengths/needs
- TA with student specific SMART goals for major conditions
- State level data collected to support progress
Why is Data Important?

- Allows for individual and program progress monitoring
- Allows for identification of quality improvement needs
- Provides valuable information to school administrators and community stakeholders
NC School Health Services Annual Survey Reports

- 1997 to present
- 100% voluntary with 100% participation
- Primary purpose – local program growth and improvement
- Secondary purpose – stakeholder interest in school health
- Data includes workforce, programmatic and aggregated clinical services data
- Annual data pamphlets [https://publichealth.nc.gov/wch/stats/](https://publichealth.nc.gov/wch/stats/)
Case Managed Conditions for Which Data is Collected at the State Level:

- Asthma
- Diabetes
- Weight Management
- Seizure Disorder
- Severe Allergies
- Mental/Behavioral Health
## North Carolina Chronic Health Condition Outcome Data 2018-2019

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>AVERAGE % IMPROVED STUDENT SPECIFIC OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>84%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>84%</td>
</tr>
<tr>
<td>Mental/Behavioral Health</td>
<td>77%</td>
</tr>
<tr>
<td>Seizure Disorder</td>
<td>83%</td>
</tr>
<tr>
<td>Severe Allergy</td>
<td>90%</td>
</tr>
<tr>
<td>Weight Management</td>
<td>72%</td>
</tr>
<tr>
<td>Asthma Outcome</td>
<td>% Students Achieved</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Consistently verbalized accurate knowledge of the pathophysiology of their condition</td>
<td>88%</td>
</tr>
<tr>
<td>Consistently demonstrated correct use of asthma inhaler and/or spacer</td>
<td>91%</td>
</tr>
<tr>
<td>Accurately listed his/her asthma triggers</td>
<td>91%</td>
</tr>
<tr>
<td>Remained within peak flow/pulse oximeter plan goals</td>
<td>95%</td>
</tr>
<tr>
<td>Improved amount and/or quality of regular physical activity</td>
<td>93%</td>
</tr>
<tr>
<td>Improved grades</td>
<td>83%</td>
</tr>
<tr>
<td>Decreased number of absences</td>
<td>88%</td>
</tr>
</tbody>
</table>
Summary

• All school staff have a role in chronic condition management
• All students benefit from tier 1 services
• Students with well controlled chronic conditions benefit from tier 2 services
• Students with newly diagnosed or uncontrolled conditions benefit from tier 3 services
• School nurses play a key role in providing services in tier 2 and tier 3
• Case management, a tier 3 service includes key components of the nursing process
• Data collection and evaluation are key factors in proving the benefits of case management to stakeholders
For Questions and Additional Information
Contact Your Regional School Health Nurse Consultant

<table>
<thead>
<tr>
<th>State Consultant</th>
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</tr>
</thead>
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<tr>
<td>West Region</td>
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<tr>
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</tr>
</tbody>
</table>
Thank you for your participation!