School Nurses Improving Care for Children with Chronic Illness

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University of Wisconsin – Madison
School of Nursing

Presenter Disclosures
Lori S. Anderson

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

Preliminary Studies
• Interviews with Mothers of Children with Chronic Conditions (Anderson, 2009)
  • When school nurse was involved, seen as helpful in:
    • Establishing continuity of care
    • Improving communication
    • Providing support to parents and educators
• National School Nurse Survey (Anderson, in preparation)
  • Nurses knew what to do; but needed support
    • Many children with chronic conditions
    • Isolated (>50% in rural, small communities)
    • Spread thin (49% > 1 building, 11% > 6 buildings)
    • Communication problematic
We also found:

- #1 place school nurses go to get information
- Barriers to continuing education and training:
  - Coverage at school
  - Lack of time to take a course
  - Financial or cost issues
  - Availability of offerings

Difficult for school nurse to access training and support

- Training and support comes to school nurse

What is eSchoolCare?

- A web-based educational application designed for use on an iPad
- Designed to improve competency and capacity of school nurses who care for children with chronic conditions
- HRSA funded for 3 years
- Overall goal: To improve health and educational outcomes of children with chronic conditions; to decrease negative impact child’s chronic condition has on family
eSchoolCare Team

- Leadership Group
  - UW School of Nursing
- Technical Group
  - Wellbe me
- Content Experts
  - American Family Children’s Hospital, UW SoN
- Evaluator
- Community Advisory Committee (CAC)
  - School nurses, families, health care organizations, school administrator, physician
- Quality Assessment Panel (QAP)
  - WI Chapter of American Academy of Pediatrics, expert school nurse, advanced practice nurse, special education expert

School Nurse Participants

- 14 mostly rural counties in south-central Wisconsin
- 67 school districts
- 93 school nurses
- ~34,000 children with chronic health conditions

Technical Development of App

- Early meetings with technical team to refine concept, define requirements
- Key: Early meetings with school nurse users
  - User group emphatic:
    - Make tool simple to use
    - Understandable hierarchy
    - Make as few clicks as possible to get to content
- Define School Nurse Use Case
School Nurse Use Case

1. Look something up about a chronic condition: just-in-time.
2. Study or learn more about a chronic condition: in-depth.
3. Make a plan to manage a chronic condition.
4. Use a school-specific procedure for management of a chronic condition.
5. Teach or train someone (delegate in school, parent, child) about a chronic condition.
6. Communicate with family, healthcare provider, teacher, coach, aide, secretary.

Content Organization and Development

- Wireframes, storyboards used to organize content, in collaboration with content experts
- Incorporated input from Evaluator, ensure content aligned to project goals
- Final concept reviewed by Community Advisory Committee and Quality Assessment Panel

Blueprint for the Application
Content

• Chronic Condition Modules
  • Asthma
  • Allergy
  • Cancer
  • Diabetes
  • Mental Health Disorders

• Care in Schools Program
  • CEUs
  • Community

Module Content

• Overview
  – General information, guidelines, text, photos, diagrams, pdfs, web links
• Medications and Treatments
  – Common medications and procedures
• School-based Planning and Care
  – Sample care plans, sample communication to parents, health care providers, teachers
• Education and Teaching Resources
  – Videos, lesson plans, resources
  • Content reviewed and updated every 6 months
  – Content experts, CAC, QAP

Videos

• 17 videos produced for eSchoolCare
• Very popular, excellent for teaching, ideal for iPad
Use of iPad by School Nurses

- Training
  - Instructional videos for iPad and App on website
  - Webinars
- Apps
  - Pdf handling
  - Community section to share ideas
- Other uses
  - Access school's student information software
  - Face Time

Evaluation Activities

- Nurse practice survey, 77 items, Baseline, Yr 2, Yr 3
  - Position description, practice setting, school population, chronic conditions, procedures, health room visits and disposition
  - School nursing scope and standards of practice (NASN, 2011) related to care of children with chronic conditions, planning and care activities, communication
  - Knowledge and confidence in caring for children with chronic conditions, job satisfaction, education, experience, demographics
- School nurse use of and satisfaction with app
  - Survey items at the end of content sections
  - Individual interviews and focus groups
- Utilization of the technology
  - Tracking reports - log-ins, pages viewed, bookmarks
Nurse and Workplace Characteristics

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<thead>
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<th>Nurse Characteristics</th>
<th>M (N = 86)</th>
<th>SD</th>
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<tr>
<td>Gender</td>
<td>Female</td>
<td>100</td>
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<tr>
<td>Age</td>
<td>20-29 years</td>
<td>47</td>
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<td>40-49 years</td>
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<td>50-59 years</td>
<td>326</td>
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<td>60-69 years</td>
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<table>
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<tr>
<th>Work Characteristics</th>
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<tr>
<td>Hours/Week</td>
<td>29.87</td>
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<td>Buildings</td>
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<td>2.3</td>
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<tr>
<th>Race/Ethnicity</th>
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<th>Highest Degree in Nursing</th>
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<td>Master's</td>
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Years of Nurse and School Nurse Experience

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<tr>
<th>Years</th>
<th>Nursing</th>
<th>School Nursing</th>
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<tr>
<td>&lt; 1</td>
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<td>2 to 4</td>
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<td>20</td>
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<td>5 to 9</td>
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<td>10 to 14</td>
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<td>5</td>
<td>5</td>
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<tr>
<td>&gt; 25</td>
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Relationships

- Nurse perception of their knowledge and skill in planning and caring for children with chronic conditions is significantly related to:
  - Number of buildings \( F_{(1,84)} = 3.1, p = .02 \)
  - Hours worked per week \( F_{(2,85)} = 6.109, p < .003 \)
  - Years of practice \( F_{(5,85)} = 4.823, p < .001 \)
  - Years as school nurse \( F_{(5,85)} = 16.019, p < .000 \)
Acknowledgements: eSchoolCare Team

- Leadership Group, UW-Madison School of Nursing
  - Lori Anderson - Project Director
  - Susan Riesch - Senior Faculty Advisor
  - Kate Fletemeyer - Project Manager
  - Nicole Crain - Project Assistant
- Technical Group, Wellbe.me
  - James Dias - CEO
  - Abraham Palmbach - President
  - David Elderbrock – Chief Technology Officer
  - Vicki Schmidtka – Customer Success Advisor
- Evaluator, UW-Madison School of Medicine and Public Health
  - Paul Moberg, PhD, UW Population Health Institute

Acknowledgements: Content Experts and Authors

- American Family Children’s Hospital:
  - Asthma and Allergy
    - Kathleen Kelly Shanovich MSN, RN, AEC, Pediatric Allergy and Asthma Program
  - Diabetes
    - Beth Van Den Langenbergs, MS, RN, APNP, Pediatric Diabetes Service
  - Cancer
    - Sharon Friendish, MS, RN, CPNP, CPON, Pediatric Hematology and Oncology
- UW-Madison School of Nursing:
  - Mental Health Disorders
    - Sara Parrell, MS, RN, Clinical Assistant Professor

Acknowledgments: Partners

- American Family Children’s Hospital
- Wisconsin Chapter of American Academy of Pediatrics
- Wisconsin Department of Public Instruction
- Wisconsin Department of Health Services
- Wisconsin Association of School Nurses
- National Association of School Nurses
- UW-Madison Schools of Education, Population Health Sciences
Acknowledgements: Funding

- This project was supported by funds from the UW-Madison School of Nursing Research Committee, award number 233-J805; and the Division of Nursing (DN), Bureau of Health Professions (BHP), Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS) under grant number D11HP22189.
- The information or content and conclusions are those of the author/s and should not be construed as the official position or policy of, nor should any official endorsement be inferred by, the DN, BHP, HRSA, DHHS, or the US Government.

eSchoolCare Web Site

http://research.son.wisc.edu/eSchoolCare/