


**School Nurses Improving Care for Children with Chronic Illness**

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**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



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**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 (45% > 1 building, 11% > 6 buildings)
    - Communication problematic



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### 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



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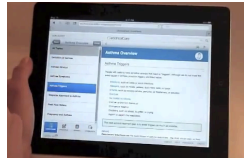
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### Difficult for school nurse to access training and support

- Training and support comes to school nurse



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### 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



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### 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



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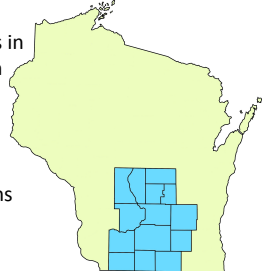
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### School Nurse Participants

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



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### 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*



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### 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.




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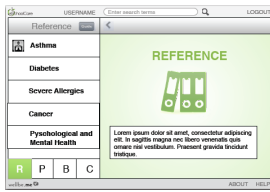

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### Content Organization and Development

- 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


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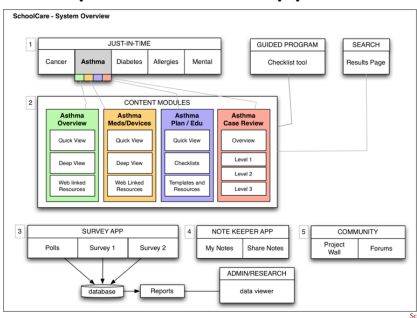

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### Blueprint for the Application


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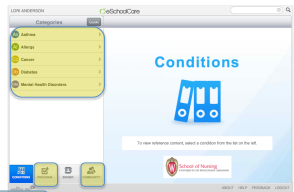
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### Content

- Chronic Condition Modules
  - Asthma
  - Allergy
  - Cancer
  - Diabetes
  - Mental Health Disorders
- Care in Schools Program
  - CEUs
- Community



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### 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



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### Videos

- 17 videos produced for eSchoolCare
- Very popular, excellent for teaching, ideal for iPad



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### 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



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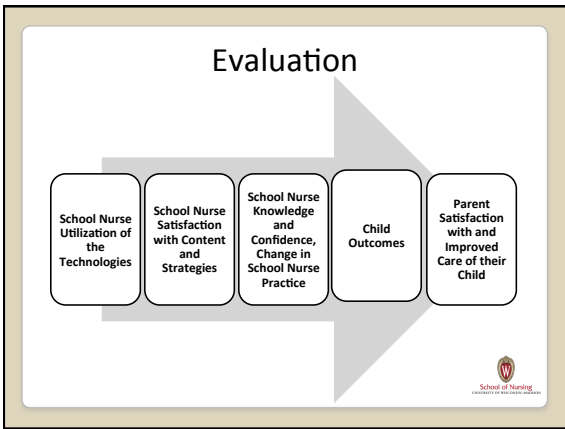
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### Evaluation Activities

- 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
- Utilization of the technology
  - Tracking reports - log-ins, pages viewed, bookmarks



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### Nurse and Workplace Characteristics

Nurse Characteristics N = 86			Work Characteristics N = 86		
		%		M	SD
Gender	Female	100	Hours/Week	29.87	10.9
			Buildings	3.47	2.5
Age	20-29 years	4.7			
	30-39 years	20.9			
	40-49 years	29.1			
	50-59 years	32.6			
	60-69 years	12.8			
Race/ Ethnicity	White	97.7			
	Mixed	2.3			
	Hispanic	1.2			
Highest Degree in Nursing	Diploma/Associate	20.9			
	Bachelors	72.1			
	Masters	7			




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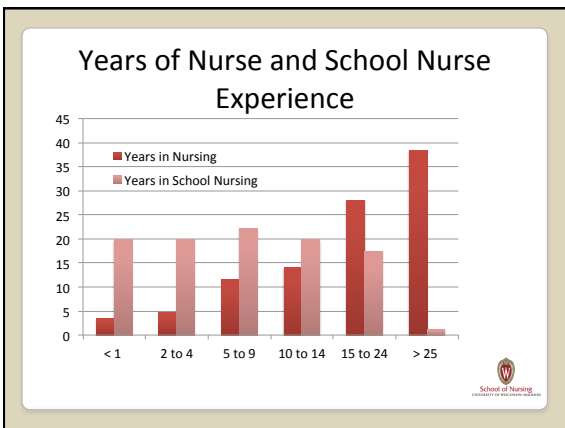
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### Relationships

- Nurse perception of their knowledge and skill in planning and caring for children with chronic conditions is significantly related to:
  - Number of buildings ( $F_{(4,84)} = 3.1, p = .02$ )
  - 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 ( $F_{(5,85)} = 16.019, p < .000$ )




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**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 Schmidtko – Customer Success Advisor
- Evaluator, UW-Madison School of Medicine and Public Health
  - Paul Moberg, PhD, UW Population Health Institute



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**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 Langenberg, MS, RN, APNP, Pediatric Diabetes Service
  - Cancer
    - Sharon Friedrich, MS, RN, CPNP, CPON, Pediatric Hematology and Oncology
- UW-Madison School of Nursing:
  - Mental Health Disorders
    - Sara Parrell, MS, RN, Clinical Assistant Professor



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**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



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### 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 (BHPr), 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, BHPr, HRSA, DHHS, or the US Government.



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### eSchoolCare Web Site

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



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