Interest in Topic

Where are the patients??
Interest in Topic

• Pediatric Nurse since 1982
• Child Neurology Nurse Practitioner 10+ years at LPCH
• Short stint as School Nurse - 2006
• Now practice Child Neurology at Kaiser Santa Clara
• Clinical Practice Committee Chair – Association of Child Neurology Nurses
• Asked to collaborate on Child Neurology Telephone Encounter Guide Project – 2007-2008
• Development of Curriculum was next logical step
Child Neurology Telephone Encounter Guides (Paperback)

by Julie Sprague-McRae (Author), Ruth Rosenblum (Author), Leslie Morrison (Author)

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Literature Review

- Children with chronic health conditions are at the intersection of the health and education systems, sometimes with conflicting philosophies (Thies, 1999)

- Ethical and legal responsibility to provide required health services to children
  - IDEA, PL 94-142, Section 504, ADA, etc.

- *Medical services* (i.e. medical model) versus
  
  *Health services* (i.e. management, prevention, promotion)
Literature Review

- Evidence-based practice and school nursing
  - Independent practice fosters incorporation of evidence into practice
    - Already have high degree of autonomy and empowerment

- Barriers to school nursing research (Broussard, 2004)
  - Lack of standardization, administrative support, time, funding, clerical assistance
  - Difficulty in gaining parental consent, confidentiality and ethics
Literature Review

- Neurologic Concerns in the Child and Adolescent Population
  - Increased confidence in managing certain conditions
    - Respiratory distress, shock, bleeding, fractures, anaphylaxis
  - Less confidence in managing others
    - Seizures, head injury, overdose, heat illness, cardiac arrest
  - Epilepsy and AIDS identified as having more overall impact in school than any other chronic health condition (Olson, Seidler et al., 2004)
- Child neurology curriculum does not exist to date
  - EFA, “Heads-Up”, Tic education
Healthy Learner Model for Student Chronic Condition Management

- Bridge between medical models that focus on adult clinical settings and school initiatives that focus on the school environment
- Integrated, coordinated effort to optimize the health status and support the academic success of children with chronic conditions
- Developed by Minneapolis Public Schools Health Related Services (2006)
Healthy Learner Model
for Student Chronic Condition Management

Evidence-based Practice

Capacity Building

Resource Nurse

Professional School Nurse

Healthcare Provider

Healthy Learner

Family

Evaluation

Leadership

© 2006 Minneapolis Special School District #1, Minneapolis Public Schools, Health Related Services
Healthy Learner Model for Student Chronic Condition Management

- Promotes nurse-parent partnership and recognizes expertise of the school nurse
- Seven essential elements:
  Leadership
  Evidence-based nursing practice
  Capacity Building
  Resource nurse for chronic conditions
  Healthy Learner
  Partnership with families
  Partnership with HC providers

Replicated:
- HL Asthma Initiative
- ADD
Purpose of Study

- The purpose of this project is to develop a child neurology curriculum for school nurses consisting of annotated PowerPoint® lectures. School nurses who have acquired the content will:

1. Demonstrate increased knowledge of etiology, epidemiology, and treatments for common neurologic conditions
2. Report increased confidence in clinical judgment when caring for students with these conditions
3. Demonstrate leadership in the use of evidence based practice to foster healthy learning for students
Areas of Concentration

- SEIZURES/EPILEPSY
- HEADACHE
- TICS
- POST-CONCUSSION
Child Neurology Process-Oriented Triage Model

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ChiNePOT

POT

- Structural format, framework for disease specific information
- Merging of process and content
- Adaptable to variety of settings
- Lends self to chronic condition management
ChiNePOT

- Thorough knowledge base required to understand and synthesize patho and pharmaco elements of care
- Skill at data collection from student, parent, other health providers
- Clinical judgment to appropriately interpret data to render safe and effective care
HLM and ChiNePOT

**Healthy Learner Model**
answers question:

“*Why* is this curriculum necessary?”

**ChiNePOT** answers question:

“*How* is the curriculum best presented?”
Research Design/Methods/IRB

- Predictive correlational design
- Convenience sample (n=31)
- SurveyMonkey.com
  - Needs Assessment of Child Neurology Topics for the School Nurse
    - Multiple choice, Likert, narrative responses
- Human subject protection via surveyMonkey.com
- University of San Francisco IRB application waived
Subject Recruitment

---School Nurses in Santa Clara County---

Needs Assessment of Child Neurology Topics for the School Nurse

Look for a surveymonkey.com email
In your mailbox in mid-May 2009!
Click on the link to complete the survey.
Your participation is greatly appreciated!

For more information or if you have questions
Please contact Ruth Rosenblum RN, MS, PNP-BC
University of San Francisco Doctoral Student
rosru@yahoo.com or 408-439-3854
Findings/Outcomes

How many years have you been a nurse? A school nurse? Please indicate in years.

- Nurse: 26.72 years
- School Nurse: 11.41 years
Findings/Outcomes

What is your educational preparation?

- Diploma: 10.3% (3)
- BSN: 62.1% (18)
- BA or BS in another field: 13.8% (4)
- MSN: 44.8% (13)
- PhD/EdD/DNP: None
Findings/Outcomes

What is your current practice setting?

- Pre-Kindergarten: 0%
- Elementary School: 94.7% (16)
- Middle School: 0%
- High School: 0%
Findings/Outcomes

Please identify the three most commonly seen neurology related diagnoses in your school setting.

- **Seizures**: 80.6% (25)
- **ADHD**: 80.6% (25)
- **Autism**: 45.2% (14)
- **Seizures**: 32.3% (10)
- **Frequently headaches**: 29.0% (5)
- **Concussion - acute head injury at school**: 35.5% (11)
- **Headaches (migraines, chronic daily headaches, etc.)**: 12.9% (4)
- **Post-Concussion - late effects of previous injury**: 8.5% (2)

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*The chart illustrates the percentage of occurrences for each diagnosis in a school setting.*
Findings/Outcomes

Please identify the three most common neurology related reasons you are contacted by the following people:

- Students
  - Symptoms (67.5%)
  - Behavior (29.2%)
  - Medication issues/questions (12.5%)
  - Administrative issues (6.7%)

- Parents
  - Symptoms (60.7%)
  - Behavior (21.4%)
  - Medication issues/questions (32.1%)
  - Administrative issues (17.9%)

- Teachers
  - Symptoms (63.0%)
  - Behavior (44.4%)
  - Medication issues/questions (11.1%)
  - Administrative issues (22.2%)

- Other school personnel
  - Symptoms (64.0%)
  - Behavior (48.0%)
  - Medication issues/questions (32.0%)
  - Administrative issues (32.0%)

- Other health care providers
  - Symptoms (63.2%)
  - Behavior (57.9%)
  - Medication issues/questions (26.3%)
  - Administrative issues (5.3%)
Findings/Outcomes

Which child neurology provider do you interface with most?

- Medical assistant: 51.6% (16)
- Registered Nurse: 19.4% (6)
- Nurse Practitioner: 6.5% (2)
- MD: 16.1% (5)
- Psychologist/psychiatrist: 6.5% (2)
- I don't interface with any child neurology provider:
Findings/Outcomes

How easy or difficult is it for you to obtain information from child neurology providers in Question #7 above?

- Very easy: 43.3% (13)
- Easy: 23.3% (7)
- Neutral: 13.3% (4)
- Difficult: 10.0% (3)
- Very difficult: 10.0% (3)
Findings/Outcomes

Would child neurology inservices or written information for school nurses facilitate the following? Select how useful each would be in your practice.

1. Improve work-flow and efficiency in...
   - Very useful: 31.8% (7)
   - Somewhat useful: 13.6% (3)
   - Useful: 31.8% (7)
   - Not very useful: 18.2% (4)
   - Not useful, no value to me at all
2. Improve your knowledge base...
   - Very useful: 72.2% (13)
   - Somewhat useful: 11.1% (2)
   - Useful: 16.7% (3)
   - Not very useful
   - Not useful, no value to me at all
3. Allow more time at school to focus on student...
   - Very useful: 38.1% (8)
   - Somewhat useful: 23.6% (6)
   - Useful: 23.8% (5)
   - Not very useful: 16.7% (3)
   - Not useful, no value to me at all
4. Eliminate the need for an urgent phone call to the...
   - Very useful: 25.0% (6)
   - Somewhat useful: 12.5% (3)
   - Useful: 41.7% (10)
   - Not very useful: 20.8% (5)
   - Not useful, no value to me at all
5. Eliminate the need for an urgent phone...
   - Very useful: 19.0% (4)
   - Somewhat useful: 19.0% (4)
   - Useful: 23.8% (9)
   - Not very useful: 38.1% (9)
   - Not useful, no value to me at all
6. Be more knowledgeable when talking to parents...
   - Very useful: 70.0% (14)
   - Somewhat useful: 10.0% (2)
   - Useful: 20.0% (4)
   - Not very useful
   - Not useful, no value to me at all
7. Increase student and parent satisfaction...
   - Very useful: 62.5% (10)
   - Somewhat useful: 18.8% (3)
   - Useful: 20.0% (4)
   - Not very useful
   - Not useful, no value to me at all
8. Increase my comfort level with child...
   - Very useful: 55.0% (11)
   - Somewhat useful: 20.0% (4)
   - Useful: 18.8% (3)
   - Not very useful: 25.0% (4)
   - Not useful, no value to me at all
9. Improve general assessment skills...
   - Very useful: 58.3% (9)
   - Somewhat useful: 18.8% (3)
   - Useful: 25.0% (4)
   - Not very useful: 25.0% (5)
   - Not useful, no value to me at all
10. Not sure
Findings/Outcomes

When you started in your school nurse role, how did you acquire knowledge about child neurology diagnoses? Select all that apply.

- Reviewing the literature: 35.5% (11)
- On the job training: 64.5% (20)
- Mentoring from another school nurse: 61.3% (19)
- Continuing Education conferences: 71.0% (22)
- Formal educational degree with specific Child Neurology focus: 74.2% (23)
- I am "comfortably knowledgeable" in this area: 26.8% (8)
- I have minimal knowledge in this area: 3.2% (1)
- Other (please specify): 22.6% (7)
Findings/Outcomes

Which of the following content do you think is valuable for your current role? (Check all that apply)

- Care and case management training
  - No value to me at all: 25.0% (6)
  - Not valuable: 19.0% (4)
  - Neutral: 33.3% (6)
  - Somewhat valuable: 20.0% (5)
  - Very valuable: 20.0% (5)

- Managing patient/parent encounters
  - No value to me at all: 41.7% (10)
  - Not valuable: 57.1% (12)
  - Neutral: 44.4% (8)
  - Somewhat valuable: 36.0% (7)
  - Very valuable: 20.0% (5)

- OSN/CNSN Practice Guidelines on various topics
  - No value to me at all: 20.0% (5)
  - Not valuable: 55.0% (11)
  - Neutral: 44.4% (8)
  - Somewhat valuable: 55.0% (11)
  - Very valuable: 80.0% (20)

A collection of educational material focusing on assessment evaluation, managing patient/parent encounters, and practice guidelines on various topics by experts in the field.
Findings/Outcomes

When you started in your school nurse role, how did you acquire knowledge about child neurology diagnoses? Select all that apply.

- Reviewing the literature: 74.2% (29)
- On the job training: 64.5% (20)
- Continuing Education conferences: 61.3% (19)
- Formal educational degree with specific Child Neuro focus: 71.0% (29)
- I am "comfortably knowledgeable" in this area: 35.5% (11)
- I have minimal knowledge in this area: 25.8% (8)
- Other (please specify): 22.6% (7)
For which of the following child neurology topics would further education be useful to you?

- SSEA tone
- SSEA absence
- SSEA focal
- Headache - migraine
- Headache - cluster
- Headache - other
- Fatigue or Syncope
- Concussion - acute care
- Concussion - long-term
- Other brain injury
- Central pain
- Other

57.1% (16), 57.1% (16), 50.0% (14), 50.0% (14), 57.1% (16), 42.9% (12), 42.9% (12), 42.9% (12), 42.9% (12), 35.7% (10), 60.7% (17)
Findings/Outcomes

Which method is the best way for you to receive educational content? (Choose two.)

- In-person lecture/Presentation: 76.7% (23)
- Online study on your own, e.g., learning modules: 40.0% (12)
- Written information in handbook form including case studies: 33.3% (10)
- Formal educational conference: 36.7% (11)
Findings/Outcomes

Are you familiar with or have you used any of the following resources?

- I am not aware of this at all
- I am aware of this but have never used it
- I have used this

Bar chart showing percentages and numbers for each resource.
Limitations

- Small sample size (n=31)

- Homogeneous sample
  - Limited generalizability

- Postponed implementation of curriculum due to H1N1 pandemic Fall 2009
Implications for Practice

- **General:**
  - Ongoing need of school nurses for evidence-based research to guide practice

- **Project-specific**
  - Feasability or “buy-in” by health service managers
  - Who will benefit?
  - Cost issues/cost effectiveness
  - Integrity of content
  - Increased knowledge of content area
Recommendations

- Broadening of content areas to include:
  - Autism, Asperger’s Syndrome, Developmental Delay

- Assess further educational needs of school nurses in related areas

- Collaborate with organizations that have educational offerings in place (EFA, TSA, etc.)
Proposed Dissemination of Findings

- CSNO Conference, Fresno, 2011
- NAPNAP Conference, Baltimore, March 2011
- NASN Conference, Chicago, June 2010
- Other areas for dissemination
  - Graduate schools of nursing (PNP and FNP programs, Pediatric Clinical Nurse Specialists)
  - Physician assistant programs
  - Child and Adult Neurology physician fellowship programs, and general pediatric resident programs
  - Other?
Future Directions for the Child Neurology Telephone Encounter Guide Project

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DEVELOPING A CHILD NEUROLOGY CURRICULUM FOR SCHOOL NURSES

- School nurse certified
- Program approved by NCSP
- Program designed by school nurses and child neurologists
- Evidence-based practice
- Family-centered approach
- School nurse high degree of autonomy and collaboration
- Child neurology and school nurse collaborative model
- Curriculum to be implemented in phases


- Surveillance
- Health promotion
- Health screening
- Parent counseling
- Health education
- Referral to other health professionals

Child Neurology Assessment for School Nurses

- NCS (2004)
- TSM (2004)
- TMS (2004)
- ACLS (2004)
- EMT (2004)
- Other relevant knowledge

FUTURE DIRECTIONS

- Healthy Kneads Initiative
- CANOFT: woman-presenting
- Tele-Neurology
- Family-centered care
- school nurse collaborative model

Note: This information is for educational purposes only and should not be used as a substitute for professional medical advice.
Lessons Learned

- Do not underestimate the impact of an influenza pandemic!
- Double estimates of time needed to complete project
- Build on a project already in progress – don’t reinvent the wheel
- Collaborate with someone whose style and work ethic complement your own and with whom you can be (brutally) honest
- Always back up files
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