FEASIBILITY OF COLLECTING SCHOOL NURSE DATA?

Gauging the impact of school health care on
health, wellbeing, and outcomes

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Why school nurses?

- Access

- Public health

- Chronic & acute care

▸ Uninsured,
  underinsured
  undocumented
▸ Depends on schools to
  fulfill mission
▸ Increasingly complex
  health care in schools

Highly educated

▸ Diploma	4%
▸ Associate degree	9%
▸ Bachelor degree	50%
▸ Master's degree	28%
▸ Doctorate	2%
▸ APRN	2%

Maughan & Mangena, 2013

Cost effective

▸ Salaries
  ◦ School Nurse $46,416
  ◦ Hospital $63,809
  ◦ Average registered nurse $61,706

(HRSA, 2010; NCES, 2010)

What do school nurses do?

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What is the impact on outcomes?

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The Dilemma

What do school nurses do?

- Dearth of data – data orphans
- Many without electronic records
- Multiple unlicensed personnel
- When nurses are cut, what will be missed?

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The Dilemma

American Federation of Teachers (AFT) School Nurse Advisory Committee:

▸ Limited research on school nurses' impact on education & health outcomes
▸ Barrier to advocating for school nursing positions

Yet

▸ When layoffs loom, poor voluntary compliance with comprehensive data collection

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American Federation of Teachers (AFT) School Nurse Advisory Committee:

To be palatable to participants, data points must be:

▸ Limited, not comprehensive
▸ Important
▸ Easy to measure
▸ Ideally, already documented

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Purpose

To evaluate the feasibility of collecting school nurse generated data

American Federation of Teachers
School Nurse Advisory Panel

- What to collect?
  - Selected from list of 57 identified measures
  - Sensitive to school nursing quality and intensity
  - Important to stakeholders

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American Federation of Teachers
School Nurse Advisory Panel

Selected indicators:
Health office visits (#)
Early dismissal
Medication administration
Parent, staff, provider communication

- Considered, but not selected were: Immunization rate, exclusions, medication errors, attendance

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Web Data Collection Instrument
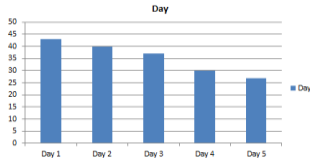
- Survey Monkey web interface
- 5 day snapshot
- 15 daily questions
- 14 demographic questions asked first day
- Pilot: 15 minutes
- Approved University of Illinois Chicago IRB

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Findings

▸ 42 nurses responded day 1 (*some ineligible)
▸ Day 5, 31 nurses responded
▸ Data collection time decreased daily
  ◦ Initially 5 – 15 minutes with outliers (40 minutes)
  ◦ Day 5 of data collection, time to complete the survey was 6.6 minutes

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Results

Number of Respondents

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Respondents:

- Average case load: 996 students
- Caseload range: 47–4500

- Number of schools served: 1–6
- Average number of schools served: 1.66

- 92% bachelors degree or higher

Results

- 7403 health office visits
- 2261 medications administered
- Communications
  - Parents – 1309 (many cited 30–60 minute calls)
  - Health providers – 198
  - Staff – 1312

On a average day…..

- 43.5 students (6.5 students per hour)
- 14 medications
- 17 communications
  - 8 parent contacts
  - 8 staff contacts
  - 1 health provider contact

59 Unique Medications

Acetazolomide (Diamox)
Albuterol HFA
Alprazolam (Xanax)
Amphetamine dexmethylphenidate (Adderall)
Amphetamine salts
Atomoxetine (Strattera)
AYR nasal gel
Baclofen
Benadryl
Budesonide
Bupropium (Wellbutrin)
Carbamazepine (Tegretol)
Cetirizine (Zyrtec)
Clobazam (Onfi)
Clonazepam (Klonopin)
Clonidine
Cyproheptadine HCL (Periactin)
Divalproex sodium (Depacote)
Dexmethylphenidate (Focalin)
Dextroamphetamine (Dexadrine)

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Medications (cont)

Erythromycin
Felbamate (Felbatol)
Fluoxetine (Prozac)
Gabapentin cyproheptadine
Guanfacine (Intuniv, Tenex)
Hydrocortisone
Ibuprofen
Insulin
Lactase (Lactaid)
Levetiracetam (Keppra)
Lisdexamfetamine dimesylate (Vyvanase)
Lithium
Methylphenidate (Ritalin, Concerta)
Olanzapine (Zyprexa)
Oxcarbazepine
Pancreatic enzymes (Creon)
Pedialyte
Pediasure
Propanalol
Quentiapine (Seroquel)

Medications (cont)

Risperidone (Risperdal)
Setraline (Zoloft)
Sodium Benzoate
Sunscreen
Valproic acid

prn
Acetaminophen
Albuterol / Albuterol MDI
Calomine lotion
Diphenhydramine (Benadryl)
Dicyclomine (Bentyl)
Fioricet
Hydrocortizone
Ibuprofen
Naproxen
Hay fever / Allergy

Selected Qualitative responses:

▸ *"Loved doing this. I like looking back at what I actually did during the day."*

▸ *"Glad to participate. Interesting to see #'s, for ourselves as well! Important to define and quantify what we do ; thank you for these efforts. Will be glad to participate in future projects!"*

Selected Qualitative responses:

▸ *"I think it's easier than we realize with detailed and thoughtful questions and consistent data collection."*

▸ *"Cannot wait to see the results and put them to good use!"*

▸ *"SNs are responsible for serious student health conditions that have the potential for negative outcomes daily."*

Limitations: Guesstimates

▸ Some admitted guessing data reported, especially communication with parents, staff, health care providers

▸ Often data entry occurred several days later, increasing concern about reliability

▸ Round numbers suggest inaccuracies

Limitations

▸ Collecting data more difficult without electronic health records

Implications

▸ Some nurses, even with limited data collection, will not respond / sustain response > 2-3 days

▸ Emphasis on school nurses' role in care coordination of individuals with chronic conditions, imperative that all communication / coordination activities be documented

▸ Increase validity of data – no guessing
▸ http://nces.ed.gov/globallocator/

Implications

- By limiting to a finite days, a few salient items, data collection is feasible
- Nurses validated by daily summaries
- Trend to replace nurses with unlicensed personnel is alarming for children, families, nurses who delegate, the unlicensed personnel ultimately accountable safe medication administration

Implications

- Even limited study illustrated scope, depth, complexity of school nurse practice
- Data communicate significant role of school nurses in child health care delivery system
- Decrease data collection burden, increase district, regional, national data
- Accelerate adoption of electronic records and a core data set

School nurse data necessary to measure cost effective impact on education and health outcomes

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Thank you!!

Albert
Shanker
Institute

NASN