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Barriers to the School Nurse's Role During a Disease Outbreak

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Purpose:

As a result of decreasing immunization rates, outbreaks of vaccine-preventable diseases have become more common in the past 5 years. Many countries, including the United States, Canada, Australia, and many European countries, require immunizations to attend school or incentivize immunizations in some way, yet increasing vaccination exemption rates have resulted in an increase in disease outbreaks (Scutti, 2017.) This is especially problematic for immunocompromised children because they are no longer protected by the herd effect.

School nurses make an enormous impact when managing illness, thus the school nurse's response to outbreaks should be a priority. School nurses have proven to be very helpful in improving the health of students (Best, Oppewal, & Travers, 2017). In cost-benefit analyses, school nurses are found to be effective advocates of health and result in a net benefit for schools and communities (Wang, Vernon-Smiley, & Gapinski, 2014; Rodriguez E., Rivera, Perlroth, Becker, Wang & Landau, 2013). Many studies illustrate that school nurses effectively promote immunization compliance in schools (Lineberry & Ickes, 2015), but few have explored the role of school nurses in managing an outbreak (Chrysanthy, Rios & Pannaraj, 2012). An effective school nurse can be of great benefit in a disease outbreak, however in most school districts, the role of the school nurse is unclear.

The purpose of this study is to explore the role of the school nurse during a disease outbreak. Increasing rates of vaccine-preventable disease outbreaks have made the response of the school nurse a priority. However, the role of the school nurse in a disease outbreak is unclear and varies between school districts and regions.

Methods:

After receiving IRB approval, a convenience sample of nurses was established through the Utah School Nurses Association (USNA). Focus groups were conducted at the 2017 USNA Conference. Three 45-minute focus groups with eight participants each were conducted following a semi-structured interview guide. Focus groups were audio recorded for transcription. All findings were combined and analyzed.

Results:

Current Response Algorithm

Currently, outbreak response follows a seedy pattern and varies by school. Generally, the local health department declares a disease outbreak after a health provider reports diagnosing a communicable disease. The health department contacts school administration and the school nurse. The school nurse must identify the students and staff that are not vaccinated, non-immune, or medically fragile and exclude them from school.

Barriers to Response

In Utah and in most of the United States, school nurses are assigned several schools to oversee. As school nurses cannot be onsite at all times, they are often left out of communication between schools and the health department. Additionally, the child's healthcare provider may give parents information that conflicts with the school nurse and social media messages can cause community panic. School nurses report unclear guidelines for managing medically fragile children and frustration for lack of immunization records of teachers and staff. All of which nurses are not trained to handle.

Conclusion:

The findings of this study indicate that training for school nurses should be improved. Nurses expressed a desire to receive training upon hire and periodically afterward, and be involved in the development of the training. Training should include a general outline of what to do in an outbreak and how to deal with social media issues.

The findings of the study had several other implications for school systems and healthcare providers. A lower nurse-to-student ratio would allow nurses to work more quickly and effectively, and improves student's health and safety (NASN School Nurse, 2015). Managing disease outbreaks would also be more effective if school systems had a reporting system for school staff members to report their immunization status, as determining the immunization status of staff members often takes a lot of the school nurse's time during an outbreak. Finally, the school nurses presented a need for some healthcare providers to be trained regarding local outbreak statutes and guidelines, to ensure they are on the same page as the nurse.

In summary, many of the barriers school nurses in Utah face in managing disease outbreaks are due to increased workload, lack of communication, and training deficiency. School nurses could more effectively manage disease outbreaks if the nurse to student ratio decreased. Additionally, an improvement in communication through more thorough training may help to better manage disease outbreaks.

Title:
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Keywords:
disease outbreak, public health and school nursing

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Abstract Summary:
A study of the role of the school nurse in a disease outbreak, in which the current response is identified and interventions for improvement in outbreak response are examined.

Content Outline:
1. Current State

- School nurses are effective in increasing overall health of students and communities
- School nurse expertise should be used to prevent and control disease outbreak
- Plan for disease outbreaks varies by school, district, and region
- Varying expectations and procedures for school nurses

2. Purpose of Study

- Identify response algorithm for disease outbreak in schools
- Identify barriers for school nurses and how the system could be improved

3. Results

- Response Algorithm
- Barriers
    1. No training
    2. Nurses assigned to too many schools
    3. Poor communication with school administration and health department
    4. Social media messages from parents
    5. Mixed messages from healthcare providers
    6. Medically fragile students
    7. No records of immunization of school teachers and staff
    8. Increased exemptions and increased disease outbreaks

4. Implications

- Standard training for all school nurses would improve outbreak response
- Lower nurse to student ratio would allow nurses to be more effective
- Policies for staff to report immunizations would allow nurses to work more efficiently

First Primary Presenting Author
Primary Presenting Author
Katherine M. Christensen, BSN
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Professional Experience: 2013-present-- Nursing student at Brigham Young University, Provo, UT 2016- present-- Research assistant to Lacey Eden, MS, FNP-C and Assistant Teaching Professor at Brigham Young University, Provo, UT Organized and analyzed research under the direction of Lacey Eden, MS, FNP-C and Janelle Macintosh, PhD, RN Lobbied at 2017 Utah State Legislative Session for immunization- related bills for the purpose of promoting immunization compliance in Utah schools Provided evidence and organized information to support a bill to increase funding for school nursing for lobbyists for 2018 Utah Legislative Session. Presented research findings independently at multiple research conferences.
Author Summary: Katherine Christensen graduated as a Bachelor of Science in Nursing in December of 2017. As an undergraduate she worked as a research assistant with Lacey Eden on multiple school nursing and immunization-related projects. She developed a passion for public health when volunteering as a representative for her church in Florida and Alabama, where she helped organize assistance for the basic needs for impoverished families, and hopes to become a school nurse in the future.

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Professional Experience: Mrs Eden is an Assistant Teaching Professor and has participated in many community projects and research projects to improve immunization rates. Over the past five years she has served as chair on local and national immunization coalitions. Additionally, she has presented podium presentation at several local, state, and national conferences.
Author Summary: Lacey Eden is a family nurse practitioner and loves to care for the pediatric population. Her experience teaching parents about immunizations has created a passion and drive to improve immunization rates to protect those most vulnerable. Mrs Eden spearheaded House Bill 308 that passed the 2017 Utah State legislative session and requires parents to complete standardized education prior to claiming an exemption.

Third Author
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Professional Experience: Assistant Professor Macintosh teaches the research course to the undergraduate students at Brigham Young University in the College of Nursing. Her focus is on immunization rates in the Newborn Intensive Care Unit. She has been teaching research at BYU for 6 years and has mentored over 30 students in research projects.
Author Summary: Professor Macintosh has published several research articles on improving immunization rates. Her research has been presented at several local, national, and international conferences. Her passion for immunizations is obvious and students enjoy learning from her and doing research with her.

Fourth Author
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Professional Experience: Associate Professor Karlen E "Beth" Luthy is well-known for her involvement in vaccination promotion activities. Since 2006, Associate Professor Luthy has authored 14 articles on the topic of immunizations. She has served as the Chair of the Utah County Immunization Coalition and the Chair of the Immunization Special Interest Group for the National Association of Pediatric Nurse Practitioners.

Author Summary: Professor Luthy has presented her research at several local, national, and international conferences. Her expertise is sought after for television, newspaper, and radio interviews on a regular basis. Her expertise in improving immunization rates has led to several successful community improvement projects that have increased immunization rates in Utah County.