

ECHO Telementoring Applied to Managing Students With Seizures

The Benefits for School Nurses

Angela M. McPhillips, DNP, RN, NCSN, PHNA-BC 

Rebecca J. Schultz, PhD, APRN, CPNP-PC

Mary Nasuta, RN, MS, NCSN

Patricia O. Shafer, RN, MN

Project ECHO (Extension for Community Healthcare Outcomes) is an evidence-based telementoring approach to connect often siloed school nurses with a network of expert clinical and academic faculty, as well as school nurse colleagues throughout the country by engaging in case-based learning. Managing Students with Seizures ECHO: The Importance of School Nurses (MSwS ECHO) provided two cohorts of school nurses with an interactive, bidirectional educational program focused on various aspects of seizures and epilepsy relevant to school nurse practice. MSwS ECHO enhanced school nurses' confidence in caring and advocating for students with seizures and epilepsy, expanded school nurses' access to resources and professional networks, and provided the opportunity to collaborate with experts and colleagues to problem solve challenging real-life cases. The ECHO Model is a unique and effective teaching modality that can

be applied to a variety of school health topics and chronic conditions. School nurses are encouraged to participate in forthcoming ECHO-based learning opportunities.

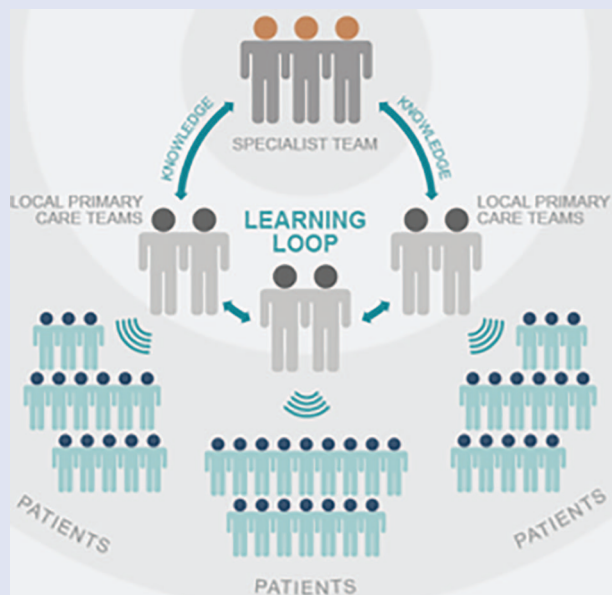
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Introduction

Approximately six out of 1,000 students in the United States have epilepsy (Zack & Kabou, 2017). Students with seizures and epilepsy have a unique set of healthcare needs and face challenges in the school setting as a result of inconsistent access to a school nurse, medication delegation barriers, and knowledge deficits in seizure management among school personnel (Hartman et al., 2016). To address these challenges and increase access to quality

care for children and youth with epilepsy, the Epilepsy Foundation (EF) partnered with the American Academy of Pediatrics (AAP) National Coordinating Center for Epilepsy (Center) to use the ECHO model in developing the Managing Students with Seizures ECHO: The Importance of School Nurses (MSwS ECHO) program. Project ECHO (Extension for Community Healthcare Outcomes) is an evidence-based telementoring approach that employs a partnership model in which partner organizations replicate the ECHO model to create learning communities that meet the needs of their professional network and patients. There are currently 412 global partner organizations (hubs) with 77 ECHO focus categories (University of New Mexico, 2020). The MSwS ECHO program was developed by the AAP ECHO hub in collaboration with the EF. This free educational program was promoted by the National Association of

Figure 1. Project ECHO model



Note. Used with permission from Project ECHO. ECHO = Extension for Community Healthcare Outcomes.

School Nurses (NASN), with two NASN members contributing content and participating as expert faculty. The MSwS ECHO connected often siloed school nurses with a network of expert clinical and academic faculty, as well as school nurse colleagues throughout the country to participate in case-based learning, specific to meeting the needs of students with seizures and epilepsy.

Method

What Is Project ECHO?

Project ECHO is a teaching modality that uses videoconferencing technology to train and support healthcare providers through case-based learning and brief lectures on various health conditions (Arora et al., 2010; Arora et al., 2011). This model builds the capacity of healthcare providers to better manage subspecialty conditions in the setting in which they work. The ECHO model fosters an “all teach, all learn” philosophy by promoting bidirectional learning among faculty and participants (see Figure 1). The evidence-based design of the ECHO model embodies the following concepts: interactive, comanagement of

cases, peer-to-peer learning, and collaborative problem solving (Arora et al., 2010; Arora et al., 2011). The approach encourages participants to take an active role in the hour-long session by presenting a deidentified patient case, contributing to discussion based on their own experiences, and asking clarifying questions to enhance the discussion.

The evidence-based, telementoring structure of Project ECHO differs from traditional webinars that school nurses often attend to earn continuing nursing education credits. The interactive nature of ECHO encourages active participation in which participants can ask questions of both interdisciplinary experts and school nurse colleagues, as well as share their experiences in addressing challenging healthcare issues in the school setting, building a bidirectional community. In preparation for the ECHO session, participants are encouraged to submit a deidentified case they have experienced or are currently encountering in the school setting that they find particularly challenging. A brief lecture on a specific topic is presented at the outset of the session, with the

majority of the session devoted to case-based learning. The case presenter (participant or faculty) shares their case with the network, then expert faculty and other participants provide feedback and suggestions. This format promotes robust discussion specific to the case presentation and provides feasible recommendations for the network of learners that can be applied to their own practice settings.

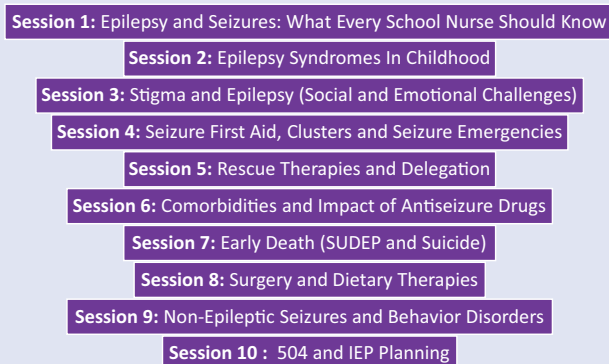
Managing Students With Seizures ECHO: The Importance of School Nurses

School nurses and other school personnel from states in the United States with the highest prevalence of epilepsy were recruited through the NASN, other school-based organizations and associations, as well as AAP and EF membership networks. Institutional review board approval was granted through the AAP. The first iteration of MSwS ECHO launched in February 2019 and continued through June 2019. Eight 1-hour sessions were delivered to two cohorts every 3 weeks. Curriculum was adapted from the EF's school nurse training. The ECHO faculty included a multidisciplinary team of school nurses, epilepsy nurses, epileptologists, behavioral health providers, parents, youth with epilepsy, and educators. Content covered Epilepsy and Seizures: What Every School Nurse Should Know; Epilepsy Syndromes in Childhood; Stigma and Epilepsy (Social and Emotional Challenges); Seizure First Aid, Clusters and Seizure Emergencies; Rescue Therapies and Delegation; Comorbidities and Impact of Antiseizure Drugs; Early Death (Sudden Unexpected Death in Epilepsy and Suicide); Surgery and Dietary Therapies; Non-Epileptic Seizures and Behavior Disorders; 504 and IE (individual education) Planning (see Figure 2).

Results

A total of 48 school nurses representing 41 unique schools and seven states (Illinois, Massachusetts, Maine, New York, Ohio, Utah, and Oregon) participated in the ECHO

Figure 2. MSwS curriculum topics



Note. MSwS = Managing Students with Seizures; SUDEP = Sudden Unexpected Death in Epilepsy.

program. The majority of nurses (82%) served schools in suburban and rural areas (44% and 38%, respectively). Nurses from all levels of the school education system participated in the MSwS ECHO although the majority served elementary schools.

School nurses reported high satisfaction with ECHO sessions and the telementoring model. Benefits of MSwS

ECHO included improved knowledge of and interest in managing seizures in the school setting as well as contribution to their professional network. Based on retrospective self-report, school nurses indicated significant improvements in knowledge and confidence regarding management of seizures and comorbidities among students after participation in MSwS ECHO.

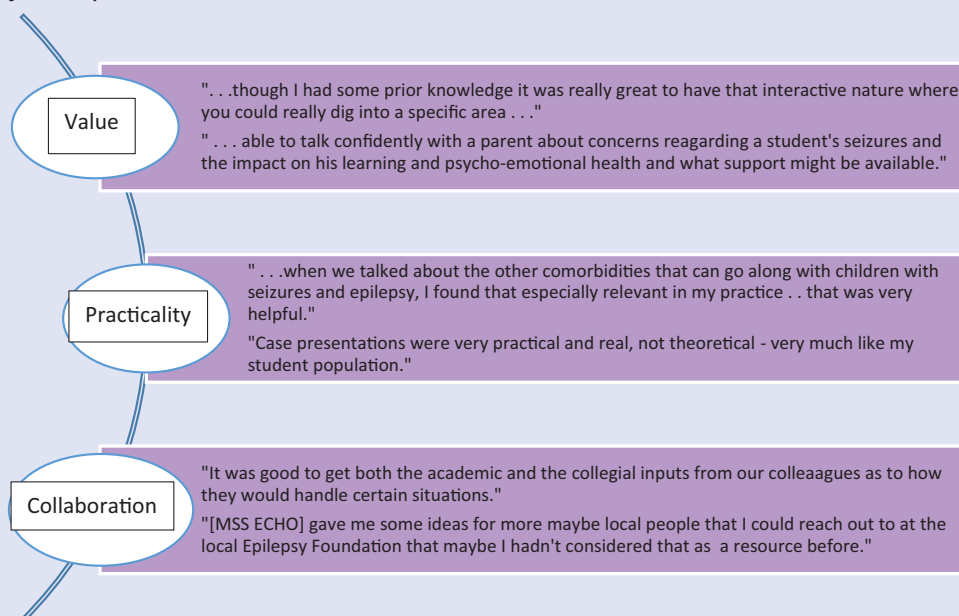
Two overarching themes, ECHO experience and ECHO impact, emerged from analysis of the postsession written comments and a post-ECHO virtual focus group interview. Key concepts that emerged were value, practicality, and collaboration. Participants valued the didactic presentations as a source of both new and review information and the opportunity to dialogue with expert faculty and other school nurses. Data also suggested that the ECHO affected the nurses' collaboration with colleagues, other school nurses, and community organizations (see Figure 3).

Discussion

Implications for School Nursing Practice

School nurses can benefit greatly by participating in ECHO learning opportunities to enhance care to students with specific or complex health conditions, as demonstrated by the success of MSwS ECHO. The ECHO model presents tremendous opportunities to advance the practice of school nursing and aligns with several practice

Figure 3. Key concepts



Note. MSS ECHO = Managing Students with Seizures Extension for Community Healthcare Outcomes.

components of the *Framework for 21st Century School Nursing Practice* (Framework). As school nurses often function in solitary settings with limited occasion to confer and collaborate with other nurses, ECHO can increase school nurses' effectiveness through joint problem solving and best practice learning from each other and faculty experts. This demonstrates the Framework's practice components of evidence-based practice, chronic disease management, and collaborative communication (NASN, 2020). The "all teach, all learn" format is an effective tool to acknowledge and recognize the expertise of *all* participants. A primary benefit of the ECHO program is the safe environment for school nurses to share experiences and clarify information with content experts.

MSwS ECHO also encouraged school nurses to participate and become more confident and proficient in the use of videoconferencing. Despite some initial hesitation, participants became more comfortable with the video format and enjoyed the ability to engage with the faculty and participants. Videoconferencing skills can now be generalized to other platforms to improve school nurses' ability to participate in other relevant professional development, especially in the context of the COVID-19 global pandemic.

When discussing epilepsy in particular, we found it helpful to review foundational concepts and new classification nomenclature. The opening presentation "Seizures and Epilepsy: What Every School Nurse Should Know" served as a curriculum starting point. Discussions regarding nursing practice issues presented some challenges because nurse practice acts vary by state. Ensuing lively discussions facilitated the emergence of best practices through sharing of local school guidelines and helped connect school nurses to their colleagues. Differences in state laws were particularly evident in the discussion of delegation regulations. These differences, however, allowed nurses to learn about laws in other states and may prompt school nurses to

participate in legislative initiatives to improve practice.

The multidisciplinary MSwS ECHO faculty provided current information regarding medications, rescue therapies, and evidence-based treatment recommendations. We specifically addressed the prevailing misconception that respiratory depression is a common side effect of the low dose benzodiazepines that are used for rescue therapy. We were also able to discuss the appropriate use of emergency medical services after the administration of rescue therapies: The need to activate emergency medical services after administration of rescue medication is not automatic and is individualized per each student's seizure action plan (Hartman et al., 2016). Expert epileptologists reinforced this important message throughout the learning sessions. The interaction between the expert faculty and school nurses was mutually beneficial. The faculty physicians and advanced practice nurses increased program credibility and added valuable clinical practice information. Through their engagement with school nurse participants, faculty awareness of the obstacles that school nurses face in their unique practice setting increased.

The presentation of a case study facilitated application of the material presented. Case review served as an effective mechanism for school nurses to learn about formulating relevant questions, practice critical thinking, and hone problem-solving skills in real-world situations. School nurses participated in discussions about how to plan for care during the school day as well as before- and after-school activities. These case study features emphasized practical ways to apply several practice components of the *Framework for 21st Century School Nursing Practice*, specifically direct care, chronic disease management, and collaborative communication.

Conclusion

MSwS ECHO prepared school nurses to advocate and care for students with seizures and epilepsy and to support school personnel in the management of

seizures. The presentation of up-to-date, pragmatic information and the group critical thinking practice exercises instilled confidence in the school nurse's ability to meet the challenges of managing students with seizures and epilepsy in the school setting. School nurses who participated in MSwS ECHO reported high satisfaction with MSwS ECHO and ECHO model. The educational sessions were valuable, practical, and collaborative subsequently enhancing individual school nurse's knowledge and confidence in managing students with seizures. The ECHO model can be applied to a variety of topics relevant to school nursing (Shimasaki et al., 2019). School nurses are encouraged to take advantage of ECHO learning opportunities for epilepsy and other chronic health conditions. The ECHO model provides an interactive platform that supports learning from peers and experts, thereby expanding school nurses' professional networks and enhancing practical content application. ■

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ORCID iD

Angela M. McPhillips  <https://orcid.org/0000-0001-6381-1490>

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Angela M. McPhillips, DNP, RN, NCSN, PHNA-BC
College of Nursing, University of Illinois at Chicago
Chicago, IL

Angela M. McPhillips is a clinical assistant professor at University of Illinois at Chicago, College of Nursing, teaching school nurse certification and undergraduate-/graduate-level public health courses.

Rebecca J. Schultz, PhD, APRN, CPNP-PC
College of Nursing, Texas Woman's University
Houston, TX

Rebecca J. Schultz received a PhD in nursing science from Texas Woman's University and master's in science and Pediatric Nurse Practitioner from University of Texas Galveston. She currently works as an associate professor in the College of Nursing, Texas Woman's

University, and as an assistant professor/pediatric nurse practitioner at Baylor College of Medicine/Texas Children's Hospital Comprehensive Epilepsy program. She is a strong advocate for patient-centered family care, access to care, and acquisition of self-management skills to promote adolescent independence and successful transition to adulthood.

Mary Nasuta, RN, MS, NCSN
Harford County Public Schools
Bel Air, MD

Mary Nasuta is the supervisor of Health Services at Harford County Public Schools, Maryland, a school district serving nearly 40,000 students.

Patricia O. Shafer, RN, MN
Consultant, Self-Employed
Boston, MA

Patricia O. Shafer is an epilepsy nurse specialist, healthcare consultant, and the former Senior Director of Health Information and Resources, and an associate editor at Epilepsy Foundation.