



# The ECHO Was Heard Throughout the School

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## Project ECHO Telementoring Program in Epilepsy for School Nurses

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**Objectives:** Many children with epilepsy experience seizures at school. School nurses must have the clinical expertise to deliver high-quality, safe care for students with epilepsy. However, in some regions of the U.S. access to interactive, epilepsy evidence-based education programs are limited. The objective of this project was to assess the feasibility of adapting the Epilepsy Foundation's (EFs) school nurse education program to the ECHO model and evaluate its impact on school nurse knowledge and self-efficacy in managing epilepsy in students with seizures and program satisfaction. **Methods:** The EFs educational program for school nurses was adapted to the ECHO model and delivered by a team of interdisciplinary epilepsy specialists via videoconferencing. Retrospective post-program surveys were administered at program completion. Data from 32 participants with complete post-program surveys were used for the analysis of knowledge and confidence. Descriptive statistics and the sign test were conducted. **Results:** Participants were 166 school nurses from 13 states. The majority had >15 years of school nurse experience and served schools in suburban or rural areas. Improvements in knowledge and confidence were reported on most survey items. The highest improvements in self-reported knowledge and confidence were in psychosocial aspects of care, comorbidities, and recognition of nonepileptic events. Program satisfaction was rated as high by over 90% of participants. **Conclusions:** Telementoring using the ECHO methodology is a feasible modality to educate and link epilepsy specialists and providers with school nurses nationwide. Findings suggest that attending the MSS ECHO provided an educational and meaningful learning experience. The gains in knowledge and confidence in psychosocial aspects of epilepsy care and comorbidities highlight the importance of the inclusion of this content in educational programs


## Commentary

It is estimated that 470 000 children in the United States have epilepsy, affecting approximately 6 in 1000 students.<sup>1</sup> Pediatric neurologists often work with schools to make sure there are seizure action plans and rescue medication discussed. However, the school nurses are the individuals on the front-line who are often coordinating these efforts and are responsible for keeping these children safe in the school settings. They often educate and advocate about seizure safety, recognize the seizures, administer rescue medications, and provide psychosocial support, so that the student's educational experience is not limited by their epilepsy. Epilepsy-focused education and training for school nurses have been shown to increase confidence in managing both epilepsy and acute seizure management.<sup>2-4</sup> The Epilepsy Foundation (EF) throughout the years has provided noninteractive online and in-person training opportunities to school nurses, although sometimes limited by resources such as mentors to offer education, awareness of the available educational opportunities, or the ability to interact and ask questions. To improve these gaps and increase access to care,

the American Academy of Pediatrics in partnership with the EF's National Epilepsy Education and Awareness Collaborative developed and implemented a telehealth and telementoring program for school nurses, called *Managing Students with Seizures ECHO: The Importance of School Nurses (MSS ECHO)*. This project utilized the Extension for Community Healthcare Outcomes model (ECHO) to connect health care providers with specialists and combine didactics with case-based presentations to increase health care providers' knowledge and self-efficacy.<sup>5</sup> A combination of short didactic presentations, case presentations, and discussions with a team of interdisciplinary specialists (pediatric psychology, pediatric epileptology, nursing, social work, and patient advocates) were used to deliver the didactic content and enable participation in case-based learning.

The article reviewed in this commentary assessed the implementation and results for the first 2 years of the MSS ECHO program using retrospective post-program surveys administered at program completion.<sup>5</sup> Participants included a total of 166 school nurses, 48 school nurses representing 41 schools from 7 states in Year 1 and 118 school nurses representing






114 schools from 10 states in Year 2 of the study. The majority of the participants were registered nurses (94%, Y1 and 100%, Y2), had a bachelor's degree or higher (>50%), and had more than 15 years of experience as a school nurse (>75%). An analysis of knowledge and confidence was assessed from data from 32 participants who completed the post-program surveys. Perceived improvements in knowledge and confidence were reported across most of the survey items. The largest gain in knowledge and confidence was on topics that are not included in typical nursing epilepsy education programs, such as psychosocial aspects of care, comorbidities, and nonepileptic events. This study supported that there is a wide gap in knowledge and confidence about these topics and inclusion in all nursing epilepsy training programs is essential. Of note, the items that had the lowest percentage change on post-knowledge assessment also had the highest baseline knowledge, for example, when a seizure is a medical emergency, or use of rescue therapies and seizure action plans. Over 90% of the participants agreed they were satisfied with the training, that participation in this program was a valuable use of their time, and that their understanding of the subject matter improved. Over 67% reported feeling less isolated and over 50% reported intent to change their current practice in their school after the training. Participants reported areas for improvement that included having enough time to discuss the case presentations and ask questions and wishing there was more interaction and time for networking among participants.

The main take away message from this study was the demonstration that telemonitoring has the potential to connect nurses nationwide to each other and to expert epilepsy providers, which in turn led to reported increased knowledge and confidence in the care of seizures in students. This platform allowed participants to share difficult cases and get feedback from not only the expert faculty but also their peers. The networking and collaborations developed through these discussions cannot be underemphasized. New relationships and lines of communication were formed, which may ultimately lead to improved access to care and possible referrals to epilepsy centers, greater advocacy efforts, and an overall enhanced school experience with improved quality of life for students with epilepsy.

Limitations of this study include the small number of completed post-program surveys and whether the improvements in knowledge and confidence reported could be a result of other factors such as participating in other epilepsy educational programs. Additional studies with larger sample sizes and the use of a control group are necessary to determine the effectiveness of this telementoring program. Sustainability also remains a potential challenge, as there is the need for updated and ongoing access and active engagement and commitment from epilepsy specialists. Generalizability may be questioned as the sample may not be representative of all school nurses practicing in different regions of the country, and there may be subject bias as those who participated were willing to voluntarily participate on their personal time. Another limitation is the lack of longitudinal follow-up to measure whether intended changes actually took place or whether epilepsy management

in schools improved early recognition of comorbidities, reduced hospitalizations, and/or improved quality of life for the students.

In summary, this publication emphasizes the importance of education among the school nursing population as they are the front-line for the implementation of seizure safety in our schools. By demonstrating that telementoring using the ECHO methodology is feasible in providing educational and meaningful learning experiences, and led to improvements in confidence and knowledge in areas not traditionally taught in nursing training programs, this project and this publication are hallmarks for furthering the education, care, and safety of our students with epilepsy. Having seizures in the school setting can be anxiety provoking and embarrassing for students, and providing support for education in all aspects of the disease for our partners in the school system is essential. It is also important to note that the reported benefits from this program align with the CDC's framework for addressing student health in school settings. The CDC states that the opportunity for academic success increases when communities, families, students, and schools work together to address the needs of students with chronic health conditions, ultimately providing safe and supportive learning environments. Disease-specific education among school nursing improves access and care and has been shown to improve health and academic outcomes in students with chronic health conditions.

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#### Declaration of Conflicting Interests

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