PEDIATRIC TELEHEALTH IN THE MEDICAL LITERATURE (continued)

To characterize the disposition of children transported from an outside emergency department (ED) to a children's hospital ED and examine associations between patient and referring ED factors with discharge from the receiving ED. In this single-site study, children referred from outside EDs with lower pediatric volumes and staffed by nonpediatricians were more likely to be discharged from a children's hospital ED after transport. These transports may represent unnecessary resource use. Outreach education, shared staffing models, and telemedicine are potential methods to address unnecessary transfers.

FOR TELEPHONE TRIAGE NURSES

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Telemedicine: Lessons Learned

Several months ago I enthusiastically agreed to lead a telemedicine educational grant. This offered an opportunity to enhance skills among medical assistants and nurses who work in primary care rural clinics (originating site) and present patients to specialists who work in a multi-specialty clinic located on the campus of a large health system (distant site). Telemedicine had been established several years ago at my health system and the number of visits has been increasing every year. However, the grant funding provided an opportunity to expand the current service line and develop it into a program.

The educational grant period was only six months but the lessons learned will have a lasting impact. The grant funds allowed 10 nurses and 10 medical assistants to enroll in an on-line telemedicine course and travel to the distant site to spend a day with the various specialists who have appointments via tele-technology. In addition, the participants joined together weekly from five distant sites via teletechnology to discuss their shadow experiences and new learnings. Although many of the nurses and medical assistants had already been involved in presenting patients via telemedicine technology, they reported learning new information from the educational modules, discussions, and the shadowing experiences.

As the project leader, I also discovered ways to strengthen our existing program. This information may also be helpful to others who are considering establishing a telemedicine program in their organization or improving the service they offer. In six months, the following six themes came forward as areas of opportunity:

- **Formalized Orientation Program**
  The quality and effectiveness of a telemedicine visit relies on ensuring that training encompasses more than equipment instruction. When a patient participates in a telemedicine visit, the needs are different than an in-person visit. Healthcare systems that offer telemedicine services must provide staff with education that ensures confidence with using the technology but also verify competency in the entire workflow. A best practice in preparing staff at the origination site to confidently present a patient during a telemedicine visit is to allow for an observation day at the distant site with the clinician.
- **Clinician Preferences**
  In-person visits may vary in accordance to the specialty, so will telemedicine visits. There is not a one-size-fits-all for telemedicine visits. As the grant participants shadowed with the various clinicians, they had an opportunity to observe patient visits from the other side of the camera. The clinicians had an opportunity to discuss what was needed for an effective visit. Since the telepresenters are the "hands" of the clinicians during the visit, it is important for the clinicians to specify what is needed during an appointment. The following scenario illustrates how an understanding of clinician preferences enhances the patient experience.

A neuroscience nurse practitioner schedules follow-up appointments with patients who are diagnosed with movement disorders (e.g. Parkinson's disease). As part of the visit, there is a need to complete a movement screening. Prior to the training, the practitioner had to guide the telepresenter over the camera during every visit. The staff reported that they were not confident in performing this specialized test. During the shadowing experience, the practitioner demonstrated the screening procedure during an in-person visit. The subsequent telemedicine visits were more efficient. The telepresenting staff reported feeling more capable and the nurse practitioner noticed a significant improvement in the patients' evaluations.

In a formalized telemedicine program, practitioner specific needs should be defined, documented, and easily accessible to the staff on the other side of the telemedicine unit where the patient is present.

- **Communication -** Teletechnology offers an additional communication route between care providers from different sites. However, most communication occurs during the visit, in front of the patient. Oftentimes, the physicians at the distant site may not be familiar with the medical assistants and nurses who work at the origination site. Clear communication between the care team who do not share the same physical space is essential for patient appointments to go well. If there is poor communication, the tension will be evident to the patient or family. Examples of communication challenges are unreported delays, technology failures, or unattended patients. One solution is to create a contact list with extension numbers for each site that is kept updated so when there are connection failures, the re-connect is simple.

- **Physician Champion -** As the demand for telemedicine services grows, it is important that organizations involve physicians, nurse practitioners, and physician assistants. Since this route of care delivery is unfamiliar to many, there may be misconceptions that need to be addressed. A physician who utilizes telemedicine confidently and effectively would be an influential spokesperson to inspire others to engage in this mode of care delivery.

- **Network of Local Experts -** As with many other initiatives, there are medical assistants and nurses who may express an interest or demonstrate confidence in telemedicine. It is important to develop expertise at the origination sites. These individuals can be identified as local resources, champions, "superusers" or problem solvers. In a formalized telemedicine program, the local experts could meet with the program manager and other nurses and medical assistants at other originating sites to discuss best practices as well as challenges. This networking can provide support and camaraderie while increasing the strength of the program. The connecting can be done, just as the patient appointments, via teletechnology.

- **Standardized Workflows -** Although the various practitioners may have different preferences depending on their specialty, the telemedicine workflow and document should be standardized. During the period of the grant, I observed ten different specialty departments. There was significant variance in pre-visit planning, documentation, and the visit itself.

As a result, I observed that some areas had more no-shows, others had consistently missing lab results, and other areas did not have staff remain at the patient side. A formalized program can reduce inconsistencies and inefficiencies and improve the overall quality of every visit no matter where is occurs across a healthcare system. The educational grant provided the participants with a greater understanding of all aspects of patient care delivered through telemedicine technology. The lessons learned will be instrumental in building a stronger program.

One of the participants shared a reflection that expresses the thoughts of all who participated:

" I am really excited to learn about something that is changing the delivery of patient care and seeing the important role we play. "