Using Telemedicine to Facilitate Responsible Neonatal Transports Saves Money and Time

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Objectives

• Attendees will learn how to use telemedicine to make more responsible transport decisions.
• Attendees will learn how to save money by avoiding costly and unnecessary patient transports.

Background

Community hospitals in rural states such as Arkansas rely on academic medical centers for advice on preterm deliveries. If a neonatologist at an academic center uses interactive video (IAV) to examine an infant, the infant’s condition can be assessed more accurately than over the telephone, as several parameters can be visually assessed in the neonate. From July 2009 through March 2010, nine hospitals primarily serving a Medicaid population partnered with the University of Arkansas for Medical Sciences (UAMS), and Arkansas Children’s Hospital (ACH) to participate in virtual census rounds via a previously implemented telemedicine network. The network was created by healthcare leaders who developed a Community-Based Research and Education Core Facility, establishing telemedicine interactivity with several of the state’s outlying hospitals. Funding was also provided by the National Center for Research Resources and the Centers for Medicare and Medicaid Services via a Transformation Grant. T1 lines and codec-and-camera carts allowed videoconferencing using a high-definition resolution camera, producing a 720p (progressive scan) image.

Outcomes

During virtual census rounds at UAMS, ten consults on neonates possibly in need of transport were facilitated using IAV. Upon evaluation, eight of the ten were deemed able to remain in their community hospital, and unnecessary, costly transports were avoided (Figure 1). With an average cost of $10,000 - $12,000 for each air transport, this resulted in savings of almost $100,000 (Figure 2). Angel One, a transport system for ACH, facilitated the use of IAV in almost a third of transport calls. Chi-square analysis revealed a significant difference in the number of transports avoided when telemedicine was used versus when it was not used (p = < 0.001).

Conclusions

We conclude that using interactive video to evaluate neonates for transport prevents unnecessary expenditures and saves a great deal of time and inconvenience for healthcare providers and families.

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