



Bringing Specialty Care to Rural Communities with Telemedicine

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Background: There is a shortage of specialty providers nationwide. In the United States more than 90 percent of hospitals use locum tenens – a pricey alternative – to supplement their full-time staff. Rural communities experience challenges with provider recruitment and persistent turnover. Concurrently, there is a steady increase in rural patient populations with acute diseases. By implementing an innovative approach and leveraging telemedicine, it is possible to bring acute care to rural patients while avoiding unsustainable staffing models and costly patient transfers.

Objective: Assess telemedicine as an effective way to provide timely inpatient coverage, reduce patient transfers and avoid additional staffing costs. The pilot leveraged existing resources, workflows, and activation criteria to mimic the experience of in-person coverage. The project focused on maintaining patient care standards and care team satisfaction, while keeping the patient close to home.

Planning/Research Methods: An interdisciplinary team, including providers, nurses and operational support staff, was established to implement a weekend coverage model for a six week period. This effort included extensive collaboration between an existing tele-ICU program, Mayo Clinic Rochester (hub) and Mayo Clinic Health system – Mankato (spoke) team members. As part of the planning process, workflows, communication and training plans were developed. A post-implementation survey was deployed to assess the satisfaction of both patients and providers.

Implementation Methods: The startup costs for this project were minimal, as existing tele-ICU technology was utilized in the spoke site. To cover areas without existing technology, a mobile telemedicine cart was used. Each morning, the team would huddle and round to determine the appropriate plan of care for each patient. Initiation of telemedicine consults was determined based on need by the spoke provider. Bedside nurses played a pivotal role in providing education and explanation to patients before and during the telemedicine interactions.

Results:

During the six weekend timeframe, 100% (n=43) of specialty consult requests were completed by the hub site provider.

Key Indicators:

- 100% of patient surveys completed (n=8) reported the highest level of satisfaction
- 96% of referring (spoke) team members (n=8) reported satisfaction with the service and experience
- 65% of patients avoided transfer to a tertiary medical center
- Avoided locum hiring costs for six weekends

Supporting Data:

- 100% of spoke participants (n=8) did not encounter challenges with coordination of care
- 100% of hub participants (n=2) reported satisfaction with the ability to care for patients throughout the pilot
- Counterbalance measure: average time to complete a consult during the telemedicine pilot met or exceeded the response time for consults with in-person coverage

Lessons Learned/Next Steps: The pilot project provided specialty care coverage in a time of need, while serving as a proof of concept for leveraging telemedicine and existing resources. This model is currently being implemented for several other service lines based on the pilot's success (i.e. providing timely specialty care, avoiding patient transfers and additional staffing costs). As the model is expanded to additional areas, data will continue to be gathered. Satisfaction data from patients and their families is equally important to financial and quality data; proving that in addition to being a cost – effective option, telemedicine strengthens patient support networks and satisfaction.

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