

Philanthropy Profile

A Hospital Driven Telepsychiatry Initiative to Improve Patient Care and Reduce Costs

Hospital emergency departments across the country are struggling with the challenges of providing specialized psychiatric care in a cost-effective manner [1]. In North Carolina this challenge has led to lengthy visits for patients in rural hospital emergency departments, ranging from numerous hours to multiple days [2]. Data collected by the North Carolina Division of Health Service Regulation documented that, during the first 6 months of calendar year 2010, more than 3,000 behavioral health patients waited in excess of 2.6 days in North Carolina emergency departments for specialized treatment or inpatient placement. Additionally, over 200 of those patients waited in excess of 7 days, with the largest lengths of stays occurring in rural hospitals [3]. The problem with extended lengths of stay is not just an issue of the quality of care received, but also an issue of cost and financial burden for hospitals.

Telepsychiatry Project Overview

In late 2010, the Albemarle Hospital Foundation, part of Albemarle Health in Elizabeth City, North Carolina, received a grant from The Duke Endowment (TDE) to implement telepsychiatry in Vidant Health hospital emergency departments. Year 1 of the project was designed to establish telepsychiatry in 7 Vidant Health hospitals: Albemarle Health (Elizabeth City), Vidant Bertie Hospital (Windsor), Vidant Chowan Hospital (Edenton), Vidant Duplin Hospital (Kenansville), Vidant Edgecombe Hospital (Tarboro), the Outer Banks Hospital (Nags Head), and Vidant Roanoke-Chowan Hospital (Ahoskie). Two new hospitals, Vidant Beaufort (Washington) and Vidant Pungo (Belhaven), joined the Vidant Health system in late 2011, with telepsychiatry services implementation projected for late spring 2012. Year 2 of the grant expands the project's focus to serve non-Vidant Health hospitals.

Telepsychiatry is the use of 2-way, real time, interactive audio and video. It is run on a secure network, which meets all confidentiality stan-

dards, where a psychiatric provider in one location provides services to a patient in another location. Telepsychiatry has been found to be especially useful in rural areas where access to specialty care is limited or non-existent [4].

Under the Vidant Health/TDE project, mobile video conferencing units have been placed in 7 hospitals and desktop video conferencing systems have been placed at the psychiatric practice that performs the patient consults/assessments. This practice, Coastal Carolina Neuropsychiatric Center (Coastal Carolina), is located in Jacksonville and was selected as the psychiatric contractor because of the agency's experience, capacity, and record of quality psychiatric service delivery.

The primary objective of the Vidant Health/TDE telepsychiatry project is to make psychiatric assessments readily available for all patients presenting to the emergency department with behavioral health related issues. Additional goals and objectives include: increase the number of patients receiving comprehensive psychiatric assessments utilizing telemedicine technology; secure better quantitative information on the diagnosis of mental health, substance abuse, and co-occurring disorders; reduce the average length of stay (LOS) in the emergency department; reduce the cost of mental health care to the community by decreasing the utilization of sheriff deputies, probate judges, and designated examiners; reduce unnecessary involuntary commitments; reduce financial burden to hospitals from extended emergency department LOS; improve patient outcomes through early initiation of specialized treatment, and; improve community discharge planning for both outpatient and inpatient follow-up services as needed.

Electronically published June 7, 2012.

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0029-2559/2012/73322

Project Implementation and Operations

Albemarle Hospital began piloting the use of telepsychiatry in May 2011 for several months. Between September and October 2011 the remaining 6 Vidant Health hospitals initiated telepsychiatry services. Coastal Carolina providers offer telepsychiatry assessments/consults in each of the 7 hospitals 7 days a week from 8am to 6pm. While the project was initially designed for the emergency department, hospitals expressed a need to conduct assessments for admitted patients as well. Coastal Carolina providers now have privileges to provide telepsychiatry services for both inpatient units and the emergency departments.

To initiate a telepsychiatry assessment, an order is placed by the physician at the hospital where the patient is located and a telephone call is placed to Coastal Carolina. Intake specialists at Coastal Carolina are able to access the patient's electronic medical record (EMR) and prepare for the assessment. The psychiatric assessments take between 45 minutes to an hour and at the conclusion of the assessment, the Coastal Carolina provider makes a disposition and medication recommendation. The disposition and medication recommendations are documented by the Coastal Carolina provider in the EMR. Following disposition and recommendations, the Coastal Carolina provider conducts a peer-to-peer telephone follow up with the patient's onsite physician to ensure delivery of recommendations and to answer questions. The entire process takes approximately 60-90 minutes.

Initial Outcomes of the Project

The early outcomes of the project look very promising. Various data indicators and measures are tracked including patient and provider satisfaction, patient lengths of stay, number of involuntary commitments overturned, 30 day recidivism rates, and payer mix. Electronic surveys are distributed quarterly to providers and staff at Coastal Carolina and the participating hospitals, and the feedback received to date is very positive. Responses indicate a high level of comfort with using the technology and with the quality of the assessments being delivered via telemedicine. Providers in the emergency departments indicate high satisfaction with timely access to specialized psychiatric treatment for the patients. Data are also collected on patient satisfaction via telephone satisfaction

surveys. The survey responses reveal that 86% of patients report having a good experience with telepsychiatry and that the services they received were helpful.

Table 1 provides Vidant Hospital emergency department data since telepsychiatry services were implemented. One of the biggest early successes of the project has been the reduction in patient lengths of stay in the emergency department. The initial goal for the project was to reduce patient lengths of stay to less than 48 hours. Since the implementation of telepsychiatry, the average patient length of stay for the 7 participating hospitals has been reduced to 22 hours. Another early outcome that has a significant potential to reduce state costs associated with inpatient psychiatric treatment is the reduction of unnecessary involuntary commitments. Since the inception of telepsychiatry, 87 involuntary commitments have been overturned after the psychiatrist's assessment. Instead of needing to be sent to inpatient treatment, the psychiatrists determine they are candidates to receive treatment locally and do not need to be committed to an inpatient facility. In the first ten months since implementing telepsychiatry at Albemarle Hospital, rough calculations, based on a per diem inpatient psychiatric rate of \$1,080 and a 5-day inpatient treatment stay, indicate a potential savings of \$469,800 through the elimination of 87 unnecessary commitments to the state facility. This is based on the per diem Medicaid rate of inpatient psychiatric services of \$665.71, an average 5 day inpatient treatment stay, and a 45% self pay population.

TABLE 1.
Vidant Health/TDE Project Initial Outcome Summary

Measure	Value
Total number of ED telepsychiatry consults	878
Average number of telepsychiatry assessments per month (all 7 hospitals combined)	158
Average length of stay in hours (from time of ED admission to time of patient discharge from ED)	22
Number of involuntary commitments admitted to ED (all 7 hospitals combined)	318
Number of involuntary commitments overturned after telepsychiatry assessment	87
Percent of involuntary commitments overturned	27%

Note. Timeframe for data collection is from implementation of telepsychiatry up through February 29, 2012. Albemarle Health began services in May 2011. The remaining 6 hospitals began services in October 2011.

Project Funding and the Future

While early measures indicate strong project success, several additional measures and plans are being developed to ensure the project's sustainability once the grant funding ends. One area of focus is measuring the financial impact telepsychiatry is having on emergency department costs by reducing patient lengths of stay. Current sustainability planning of the project requires each hospital to pay a monthly subscription fee (based on each hospital's volume of use) to bridge the gap between the cost of the service and the amount of reimbursement collected. The project is tracking reimbursement rates and comparing those with telepsychiatry related expenses for each hospital as well as comparing projected cost savings from length of stay reductions. It is anticipated that the hospitals will actualize significant cost savings which will more than cover the monthly subscription fee each hospital pays for the telepsychiatry service.

As noted in the project overview, an additional focus of the project is to extend the telepsychiatry network to non-Vidant hospitals beginning in 2012. As of this publication, Carteret General Hospital in Morehead City will be the first non-Vidant hospital to join the telepsychiatry network. It is anticipated that telepsychiatry services will begin at Carteret General Hospital by summer 2012. Additionally, 4 other non-Vidant hospitals in North Carolina have expressed interest in joining the telepsychiatry network this year.

Conclusion

The Vidant Health/TDE telepsychiatry project is making promising strides in reducing patient lengths of stay, initiating early treatment, and improving care for patients presenting in the emergency department with an acute behavioral health crisis. Early findings indicate the development and implementation of this hospital driven telepsychiatry network is a promising means of addressing the challenge of providing specialized psychiatric emergency care in a cost-effective manner. NCMJ

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Acknowledgment

Potential conflicts of interest. S.F.D. has no relevant conflicts of interest.

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