

## Expanding Crisis Mental Health Care Using Telepsychiatry and Integrated Data Systems

**Telepsychiatry** is South Carolina's solution to a shortage of mental health professionals in rural emergency departments. The state uses integrated administrative data to facilitate both patient treatment and program evaluation in order to connect more patients to skilled mental health practitioners who are better equipped to diagnose and treat psychiatric illness.

### Background

Hospitals in South Carolina have been experiencing a shortage of psychiatrists and an increase in the number of undiagnosed and untreated mentally ill patients. This type of understaffing, which is particularly an issue in rural areas, leaves patients waiting at the emergency department for treatment from health care professionals who do not have sufficient behavioral health care training or experience. Recognizing this problem, South Carolina's Department of Mental Health and the South Carolina Hospital Association requested funding from The Duke Endowment to expand crisis mental health care in 2009. Together they created a statewide telepsychiatry system for all South Carolina hospitals operating emergency departments. The Duke Endowment has provided the statewide South Carolina telepsychiatry system with over \$8 million in funding to date, with the aim of providing more patients access to better care, saving hospitals money, and allowing them to use these savings elsewhere.



### How the System Works

The telepsychiatry network allows patients and emergency room physicians to consult with experienced psychiatrists through video monitors. The network is staffed 16 hours a day, seven days a week, by a team of five psychiatrists who have access to South Carolina's comprehensive statewide electronic medical record system. The psychiatrists utilize integrated administrative data from private health care organizations, state substance abuse and mental health services, criminal justice systems, free clinics, and Medicaid to gain a big picture understanding of their patients' lives in order to provide more accurate diagnosis. They use 26-inch high-definition screens and mounted cameras that can pan, tilt and zoom to evaluate a patient's symptoms and suggest appropriate treatment.

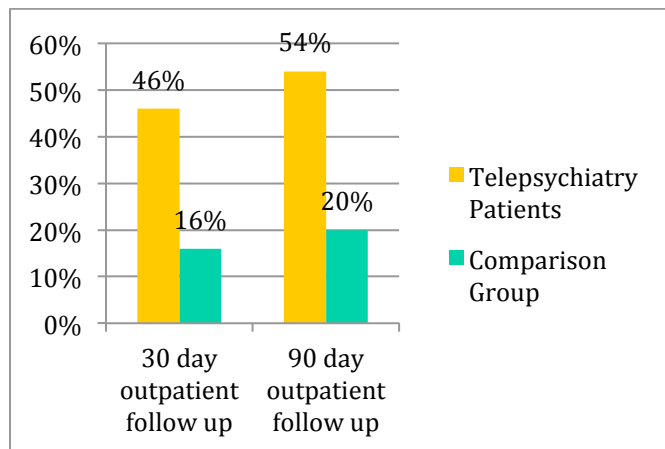
### Assessing the Impact of Telepsychiatry on Mental Health Services Use

To evaluate the impact of the South Carolina Department of Mental Health telepsychiatry intervention, the state's IDS was used to compare service use outcomes among the telepsychiatry recipients and a carefully

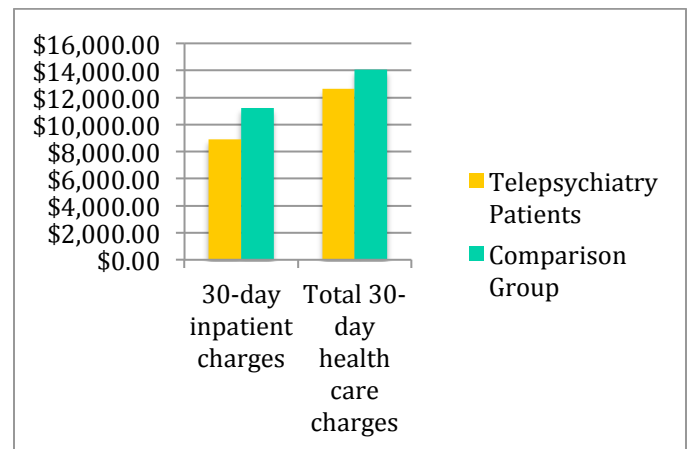
chosen control group. The control group was determined using deidentified data from the South Carolina Office of Research and Statistics data warehouse, a statewide integrated data system that gathers and links data across both private and public sector client-level data. The South Carolina data warehouse operates on a budget of roughly \$6 million annually and is staffed by 35 employees including statisticians, software developers and data base administration experts. The system has become an example for IDS's nationally, providing clients with information services such as GIS support, analytic support, deidentified data sets, data linkage, descriptive statistics, and the ability

to query data sources and generate ad-hoc reports. Evaluation results showed that telepsychiatry recipients were more likely to receive follow-up care, were less likely to be admitted to the inpatient setting as a result of their emergency department visit, had shorter length of stay if admitted to inpatient treatment, and had lower overall 30 day costs associated with their episode (Figs. 1,2). Here, integrated data were used to examine the costs associated with patients in the control group vs. patients who received telepsychiatric care by linking data from various service use providers, public and private, to assess patients in the months following their emergency department visit.

## Evaluation Findings and Impact



**Figure 1:** Program vs. Comparison Group Outpatient Follow-up.



**Figure 2:** Program vs. Comparison Group Costs.

**Admissions:** The number of patients receiving care increased from 11% in hospitals without telepsychiatry to 22% in hospitals with telepsychiatry.



**Length of Stay (in days):** Length of stay decreased from 1.35 days to 0.43 days in hospitals with telepsychiatry.



## Conclusion

The study is an example of how integrated data can be utilized to create a matched control group, a thorough understanding of patients' lives in order to provide better care, and follow up on service use outcomes. In this case, the IDS was able to demonstrate that telepsychiatry is a viable solution to the problem of psychiatric understaffing in rural areas of South Carolina.

## **References**

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