

# THE Value Initiative

## Members in Action: Redesigning the Delivery System

### Dartmouth-Hitchcock Medical Center – Lebanon, N.H.

#### *Telehealth Improves Value, Increases Access for Rural Hospitals*

The AHA's Members in Action series highlights how hospitals and health systems are implementing new value-based strategies to improve health care affordability. This includes work to redesign the delivery system, manage risk and new payment models, improve quality and outcomes, and implement operational solutions.

#### **Overview**

**Dartmouth-Hitchcock Medical Center (DHMC), the only academic medical center in New Hampshire, partners with rural and community hospitals throughout New England to provide telehealth specialty care so patients can stay closer to home.** Dartmouth-Hitchcock's telehealth approach improves outcomes and lowers costs while improving the patient experience.

Dartmouth-Hitchcock (D-H) Connected Care and Center for Telehealth started in late 2012 to mitigate DHMC's capacity constraints and increase access to specialty care throughout Northern New England, which comprises New Hampshire, Vermont and Maine. The area is mostly rural, where populations tend to have a lower mean socioeconomic status and higher levels of chronic conditions than national averages. The initiative was jumpstarted by a grant from the U.S. Department of Agriculture designed to support care in rural areas.

Through a dedicated command center staffed by D-H clinicians, patients have access to psychiatrists, neurologists, emergency medicine physicians, intensivists, neonatologists, pharmacists, nurses and other specialists. D-H Connected Care has banks of computer screens and cameras in its main hospital where physicians can monitor patients, field inquiries and provide care at a distance to patients' bedsides. Local physicians initiate the telehealth consultations, which occur via mobile units, tablets or through hard-wired networks in the local hospitals' emergency departments and intensive care units (ICUs).

D-H Connected Care provides services to 21 hospitals, 16 of which are outside the Dartmouth-Hitchcock system and comprise primarily critical access hospitals. In the first seven years, D-H Connected Care delivered or supported 1,700 TeleEmergency and TeleUrgent Care encounters, 3,800 TeleICU admissions, 2,660 TeleNeurology consults, nearly 1.4 million TelePharmacy orders, 4,450 outpatient virtual visits, and more than 10,000 eConsults.



## Impact

**Patients report D-H Connected Care improves their experience by keeping them closer to home, avoiding the time and cost of travel as well as lost wages from missing work. The service also keeps patients connected with their local providers.**

Clinical outcomes also are positive. The TeleNeurology service reports medication administration for stroke patients at rates similar to stroke specialty centers with more than 90% of the patients completing their care at the community hospitals. TeleEmergency avoided patient transfers in 13% of the cases. TelePharmacy avoided 500 medication errors per quarter and supplemented staffing at 50% cost savings.

TelePsych provides services in parts of New England that lack behavioral health providers, with 30% of patients being discharged to home after a consultation. TeleICU resulted in shorter lengths of stay and TeleSpecialty provides care at 14 service locations, including patients' homes. Two-thirds of deliveries with TeleICN (neonatologist) consult also stay local. In addition, the average length of stay for pediatric psych patients decreased from 913 minutes to 330 minutes, and outpatient virtual visits soared from 42 in D-H's fiscal year (FY) 2014 to more than 1,500 in FY 2019.

Telehealth also supplements clinical staffing in rural areas. For example, several small and rural hospitals in the area discontinued labor and delivery services, and the telehealth services increased the chances of healthy pregnancies and deliveries. In addition, by allowing for individuals to be treated in their communities, fewer patients are transferred to DHMC, where inpatient volumes are often at capacity.

D-H's patients are happy with the telehealth care they are receiving for its convenience and quality. Of patients surveyed, 91% agreed that the care they received via telemedicine was as good as a regular in-person visit and 97% reported being satisfied with the telemedicine care they received. One patient noted, "I love this approach, I feel like the level of care is a lot higher than previous doctors I have because the virtual meeting allows us to check in more frequently."

DHMC's telehealth experience also supported policy changes in New Hampshire that resulted in new laws to improve reimbursement.

## Lessons Learned

**DHMC learned it is important to take time to develop its telehealth program, produce compelling data and create a culture internally and externally that is open to telehealth.**

"It's about the care, not the technology," said Kevin Curtis, M.D., M.S., medical director of the Dartmouth-Hitchcock Center for Telehealth. "Telehealth is a virtual extension of your team. It takes only one or two encounters for the team to realize, it isn't 'telemedicine' – it's just care."



DHMC officials also stressed the importance of building collaboration with partner hospitals and clinicians and tailoring approaches that meet their needs.

“We ask them, ‘How do we create a partnership with your department and your hospital and make the whole thing more efficient?’” said Matthew Maughan, Pharm.D., director of TelePharmacy.

## ***Future Goals***

**In addition to expanding the services in new sites throughout New England, DHMC intends to develop a virtualist program and offer direct-to-consumer telehealth services.**

“Patients really like it,” said Mary Lowry, administrative director of D-H Connected Care. “They don’t have to take the day off from work, they don’t have to drive an hour and a half for their care. So that’s really where the cost savings is happening.”

---

**Contact:** Kevin M. Curtis, M.D., M.S., Medical Director, Dartmouth-Hitchcock Center for Telehealth

**Telephone:** (603) 650-1300

**Email:** [kevin.m.curtis@hitchcock.org](mailto:kevin.m.curtis@hitchcock.org)