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TELE-MONITORING CAN MAKE ICUs SAFER FOR PATIENTS
New Report Shows Hundreds of Lives and Millions of Dollars Can Be Saved

CAMBRIDGE, MA (December 1, 2010) – The [New England Healthcare Institute](#) (NEHI) and the [Massachusetts Technology Collaborative](#) (MTC) released a report today that shows tele-ICU technology could save 350 additional lives, benefit hospitals financially, and save more than \$122 million annually if broadly and effectively implemented across Massachusetts.

The study, *Critical Care, Critical Choices: The Case for Tele-ICUs in Intensive Care* analyzed data collected from a demonstration project at UMass Memorial Medical Center and two community hospitals in Massachusetts. NEHI and MTC studied tele-ICU technology because of its potential to save lives and address the supply-and-demand problem of certified clinical care physicians and nurses: their numbers are declining even as the number of patients in the intensive care units (ICUs) continues to grow.

Tele-ICU, a telemedicine technology, provides a potential solution to this problem because it allows physicians and nurses who specialize in critical care to monitor a higher volume of ICU patients in multiple, distant locations from a centralized command center.

The report's findings examined the clinical and financial benefits of tele-ICU technology on two outcomes—ICU mortality and ICU length of stay—and were announced at an event today in Boston that featured Dr. JudyAnn Bigby, Secretary of Health and Human Services, Mitchell Adams, Executive Director of the Massachusetts Technology Collaborative, Wendy Everett, President of the New England Healthcare Institute and Dr. Craig Lilly, Director of UMass Memorial Medical Center's eICU Support Center.

The top-line findings of the report are:

- **Tele-ICUs save lives.** In the academic medical center, patient ICU mortality decreased by 20 percent and total hospital mortality rates (which is time spent in ICU plus the remainder of their hospital stay) declined by 13 percent. At one of the community hospitals, ICU-adjusted mortality rate decreased 36 percent.
- **Tele-ICUs shorten ICU stays.** Patient ICU stays were reduced by 30 percent or an average of two days in the academic medical center. Community hospital stays were also reduced.
- **Tele-ICUs save money.** Hospitals recovered the up-front investments for tele-ICU in approximately one year. Health insurers saved \$2,600 per patient treated in the academic medical center. Tele-ICUs also enable community hospitals to care for a substantial portion of patients who are now transferred to teaching hospitals. Retaining these patients in community hospitals saves the payers approximately \$10,000 per case.
- **Tele-ICUs should be implemented statewide.** Given the clinical and financial benefits, NEHI and MTC recommend that all academic medical centers implement tele-ICUs by the year 2014 and that all community hospitals in Massachusetts implement them by 2015.

“The results of this report show that there are real ways to improve patient care while helping to curb the cost of care. This is exactly the kind of technology we need to move health care forward,” said Senate President Therese Murray. “The Tele-ICU model is a perfect example of why Massachusetts is a leader in health care across the country and around the globe. I want to commend Massachusetts Technology Collaborative and the New England Healthcare Institute for their work to advance health care.”

“This report demonstrates that new tele-ICU technology has the potential to address two of the most important issues facing health care delivery today,” said Health and Human Services Secretary Dr. JudyAnn Bigby. “The first is the shortage of specialists needed to serve a growing population of older patients in need of critical care, and the second, increasing health care costs that challenge our ability to provide adequate care for those who need it.”

“Tele-ICU technology represents a three-way win for patients, physicians and payers,” said NEHI President Wendy Everett. “While the data for this study was extrapolated to show the benefits of tele-ICU for Massachusetts, there are national implications as well.”

ICUs play a critical role in U.S. healthcare, treating six million of the sickest and often oldest patients annually. ICUs also have the highest mortality rate and the highest costs in health care.

“While there are challenges such as up-front capital costs that are slowing the adoption of this promising technology, the data clearly show that it saves lives and reduces costs in the health care system,” said MTC Executive Director Mitchell Adams. “Tele-ICU technology significantly expands the ability of our best trained critical care physicians to treat some of the most vulnerable patients in the Commonwealth.”

MTC and NEHI identified tele-ICU as a promising technology in 2003 when there were only three operating command centers in the country and their work in this area has been ongoing since then. This study was conducted as part of the *FAST* Initiative (Fast Adoption of Significant Technologies)—a collaboration between MTC and NEHI.

“Tele-ICU provides a unique but practical method for meeting the growing need for critical care services,” said Dr. Craig Lilly, Director of the UMass memorial Medical Center’s eICU Support Center.

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About NEHI

The New England Healthcare Institute is an independent, nonprofit organization dedicated to transforming health care for the benefit of patients and their families. In partnership with members from all across the health care system, NEHI conducts evidence-based research and stimulates policy change to improve the quality and the value of health care. Together with this unparalleled network of committed health care leaders, NEHI brings an objective, collaborative and fresh voice to health policy. For more information, visit [**www.nehi.net**](http://www.nehi.net).

About MTC

The Massachusetts Technology Collaborative (MTC) is a public agency that is advancing economic development in key areas such as health care technology, life sciences, information technology, nanotechnology, broadband deployment, and marine sciences. Through its major divisions—the John Adams Innovation Institute, the Massachusetts e-Health Institute, and the Massachusetts Broadband Institute—MTC brings together leaders from industry, government, and higher education to advance technology-based solutions that strengthen regional economies, improve the healthcare system, expand high-speed Internet access, and stimulate cluster growth. [**www.masstech.org**](http://www.masstech.org)