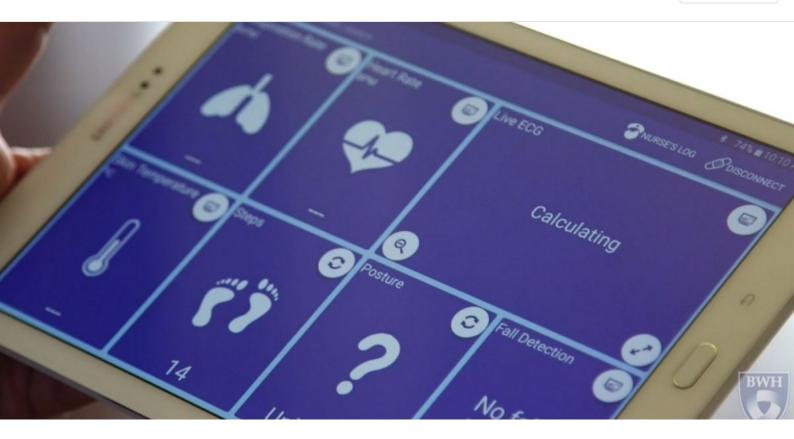
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The Hospital of the Future May Be Your Bedroom



Contributor: David Levine, MD, MPH, MA

David Levine, MD, MPH, MA, is a physician and researcher in the Division of General Internal Medicine and Primary Care at Brigham and Women's Hospital (BWH).

A typical stay at the hospital isn't always pleasurable. The food and lack of privacy can leave much to be desired. There's also the possibility of medical errors, even infection, not to mention a hefty price tag upon discharge.

"Medical expenses put one in five people into debt every year, and hospitalization contributes to the cost equation," says <u>David Levine</u>, MD, MPH, MA, a physician and researcher in the <u>Division of General Internal Medicine and Primary Care</u> at Brigham and Women's Hospital (BWH).



Hospital-level care in a patient's home

In collaboration with <u>Jeff Schnipper</u>, MD, MPH, Dr. Levine has developed "<u>The Home</u> <u>Hospital</u>" project at Brigham and Women's Hospital. Dr. Levine calls the project "outside-the-box thinking."

With the support of a \$100,000 BRIght Futures Prize, awarded in November of 2016 by the Brigham Research Institute, Dr. Levine conducted a two-month-long randomized, controlled study involving 21 patients, each of whom had entered BWH's emergency room with such issues as infection, heart failure, or asthma. Patients who met specific eligibility criteria and agreed to enroll in the study were randomized to either stay at the hospital or receive their care at home.

"We told our patients they could receive the same level of care while sleeping in their own bed, eating their own food, and spending more time with family and friends," says Dr. Levine.

One of these patients included William Terry, MD, a study participant and an administrator in the Center for Interdisciplinary Cardiovascular Sciences at BWH.

"If participating in the pilot meant that I could receive the same care that I would get in the comfort of my own home, I was absolutely on board," says Dr. Terry.

High-tech with a human touch

Data from the small pilot study showed that home hospital care was a win-win for the hospital and patient. The hospital lowered costs without sacrificing quality or safety, and doctors spent more time with patients. Patients rated a higher experience compared to previous hospital visits. They were more active and slept better.

Says Dr. Levine, "Patients also felt more independent and empowered. As a doctor, it was also valuable to see a patient in their natural environment. I saw their daily activities, what they ate, and how they lived."

How did the Home Hospital process work?

After discharge, a doctor or nurse met a patient at their home. All diagnostic work was performed at home, such as blood tests, X-rays and ultrasounds. A patient's vitals, including heart and respiratory rate, as well as movement were monitored 24/7 with wireless monitoring technology.

Patients were given an electronic tablet that allowed them to communicate anytime with medical staff via phone, text or on-demand video. Many treatments, including medications, were administered at a patient's bedside.

Terry believes he recovered faster at home. "It was a terrific project to be a part of. It's a big step forward in terms of the delivery of patient care," he says.

Dr. Levine notes that some procedures will always need to be performed in a hospital setting, but in certain cases, the home may be the best place for a patient to receive care, monitoring and treatment.

Expanding the Home Hospital model

Dr. Levine intends to study more outcomes in larger studies with more patients who have different conditions.

His ultimate goal is to see the project become a formal clinical program at BWH as well as nationally, and even across the globe.

"We want to build a better model of care for ill adults in need of hospitalization," he says.

Dr. David Levine's home hospital program was featured on CBS Evening News.

For more information, see this <u>press release</u>, <u>video</u> and <u>podcast</u> about Dr. Levine's home hospital work, as well as article in the <u>Boston Globe</u>, and a recent publication by Dr. Levine, Comparison of Physician and Computer Diagnostic Accuracy.

- By Dustin G.



In this video, David Levine, MD, MPH, MA, a physician and researcher in the Division of General Internal Medicine and Primary Care at BWH, discusses the novel care model that brings hospital services to patients at home.

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