

September 12, 2011

New Publication on Centers for Medicare and Medicaid Services (CMS) Demonstration Link Remote Patient Monitoring to Reduced Costs and Mortality

- ▶ Medicare demonstration project demonstrates that care coordination supported by content-based remote patient monitoring results in improved patient care, reduced costsⁱ and rates of mortalityⁱⁱ
- ▶ Use of Bosch Healthcare's Health Buddy System associated with noted changes in health outcomes and healthcare spending reductions up to 13 percent
- ▶ New findings published in the September edition of *Health Affairs*, the leading healthcare policy journal

PALO ALTO, California – Treatment of patients with chronic disease accounts for nearly four-fifths of U.S. health care spending. Robert Bosch Healthcare, Inc., the market leader in remote patient monitoring systems and a subsidiary of the Bosch Group, today announced new evidence demonstrating that implementing carefully designed care management and telehealth programs for these patients can help significantly reduce health care spending. As published in the article [“Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings”](#) by the leading healthcare policy journal *Health Affairs*, a research team explored the economic impact of using content-based remote patient monitoring such as Bosch Healthcare's Health Buddy Program, together with patient-centered care management for high cost Medicare beneficiaries with chronic disease such as congestive heart failure, chronic obstructive pulmonary disease and/or diabetes mellitus. Implemented within the CMS demonstration project, Care Management for High Cost Beneficiaries (CMHCB) – Health Buddy Program, researchers conducted an analysis evaluating changes in healthcare spending resulting from patient-centered care management supported by remote patient monitoring. The Health Buddy Program was associated with spending reductions of approximately 7.7% to 13.3% percent (\$312–\$542) per intervention patient per quarter over the two-year period studiedⁱⁱⁱ. These data further demonstrate the value of remote patient monitoring and could suggest savings of thousands of Medicare dollars per patient per year as a result of providing a well-designed care management program with remote patient monitoring in the home.

In addition, the researchers observed significant mortality differences between treatment and control groups, which suggest that the intervention may have produced noticeable changes in health outcomes. Mortality was not the focus of the study and further research is needed to explore these effects fully, the authors say^{iv}. This new evidence of reduced costs and mortality among patients with chronic disease provides solutions to some of America's most challenging healthcare system problems and are in concert with U.S. Department of Health and Human Services (HHS) goals of better care, better health, and lower costs for all Americans^v.

"Analysis of the CMHCB demonstration project has again shown that content-based telehealth, like the Health Buddy System, can activate collaboration and inspire engagement among patients and their care team," said Jasper zu Putlitz, MD, president, Robert Bosch Healthcare. "Patients, healthcare professionals, payers and the healthcare system overall could benefit from expanding telehealth to help address significant challenges like improving care and controlling costs when treating patients with chronic conditions."

Analysis of the Health Buddy Program was led by Laurence C. Baker, Ph.D., chief of health services research and professor of health research and policy at Stanford University, who managed a team of health economists from Analysis Group. "Coordinated efforts to treat chronically ill patients are hindered by a fragmented delivery system and discontinuities of care, among a host of other factors," says Dr. Baker. "With this research, we wanted to examine whether the introduction of this program led to changes in spending for targeted, chronically ill Medicare patients in the traditional fee-for-service portion of the program who were invited to participate."

Background on Medicare's CMHCB Demonstration Project

The Medicare CMHCB demonstration was conducted at Wenatchee Valley Medical Center in Wenatchee, Washington and Bend Memorial Clinic in Bend, Oregon. The care management teams at both clinics used content-based remote patient monitoring to improve the communication with patients, monitor their vital sign data and increase the patient's knowledge about their chronic illness(es). Patient outcomes demonstrated improved care through reduced hospitalizations and improved medication compliance among other positive outcomes^{vi}.

Sean Rogers, MD, Medical Director of the program for Bend Memorial Clinic said, "The ability for chronically ill patients to communicate their healthcare status to their physician via the Health Buddy System provides an unprecedented ability to truly monitor and manage their care. The convenience of the system empowers patients to take an active role in their care, allowing for more frequent measuring

and monitoring of their medical conditions.” CMS awarded Bosch and the two clinical sites an additional three year extension as a result of the program’s success.

A recent independent report conducted by Research Triangle Institute (RTI), Inc. for CMS of the same demonstration project, *Evaluation of Medicare Care Management for High-Cost Beneficiaries (CMHCB) Demonstration: The Health Buddy Consortium (HBC)*, stated, “The HBC program was successful in reducing the rate of all-cause hospitalizations within its refresh intervention group...We also observed an incremental increase in survival benefit among the original and refresh populations’ intervention beneficiaries who used the Health Buddy device relative to the comparison group^{vii}.” The *Health Affairs* article published by Dr. Baker reinforces this analysis from RTI.

Peter Rutherford, MD, Chief Executive Officer of Wenatchee Valley Medical Center and Medical Director of the program said, “Home telehealth monitoring in conjunction with case management, treatment protocols, and facilitated communication between the case manager and the patient’s physician clearly improved a patient’s ability to manage their chronic disease. This resulted in an improved quality of life, reduced emergency room visits, hospitalizations, and mortality.”

Aligning with the HHS goals for healthcare, better care, better health, and lower costs, remote patient monitoring has improved care by creating closer connections between patients and their care team, lowering costs and positively effecting mortality rates. Bosch telehealth systems have been improving the lives of patients with chronic disease and helping to control escalating healthcare costs for more than a decade. Over 150,000 patients have used Bosch’s telehealth systems, and there are more than 50,000 patients actively using the products today.

“The management team and staff at Bosch Healthcare are committed to furthering our efforts to provide innovative ways to enhance connectivity between patients and their care team,” Dr. zu Putnitz continued. “The findings from the additional analyses performed by Dr. Baker’s team reinforce the results from the recent CMS demonstration report from RTI, and strengthen our dedication to deliver on the promise of telehealth and improve the effectiveness of healthcare and the lives of people suffering from chronic disease.”

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About the Health Buddy System:
In use for more than ten years, the Health Buddy System allows patients to take a more active role in monitoring their health and symptoms while at home. The Health Buddy is a small device with four

buttons and an easy to read screen for patient use in the home. Each day, the Health Buddy System provides patients with a series of personalized questions and useful tips to help take better care of their health. Data generated by the Health Buddy System is sent via a telephone line, wireless modem or Ethernet connection to a secure data center and quickly analyzed, giving healthcare providers the opportunity to intervene before a patient's condition becomes critical.

About Bosch:

Robert Bosch Healthcare, Inc. is a leading provider of innovative telehealth systems. Bosch's product spectrum ranges from patient terminals to comprehensive evaluation software allowing healthcare professionals to efficiently evaluate the data coming from the patient terminals and other connected devices. Bosch Telehealth strives to improve diagnosis and treatment through systematic patient monitoring and involvement. The result is that health professionals are able to provide a higher quality of care for patients with chronic conditions, patients lead happier and healthier lives, and the cost of healthcare is reduced for funders. Robert Bosch Healthcare, Inc. is a fully-owned subsidiary of the Bosch Group. For more information, go to www.bosch-telehealth.com.

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket products, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances, solar energy, healthcare and software innovations. Having established a regional presence in 1906, Bosch employs over 22,000 associates in more than 100 locations, with reported sales of \$8.8 billion in fiscal 2010. For more information, visit www.boschusa.com.

The Bosch Group is a leading global supplier of technology and services. In the areas of automotive and industrial technology, consumer goods, and building technology, some 285,000 associates generated sales of 47.3 billion euros (\$62.7 billion) in fiscal 2010. The Bosch Group comprises Robert Bosch GmbH and its more than 350 subsidiaries and regional companies in over 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Bosch spent 3.8 billion euros (approximately \$5 billion) for research and development in 2010, and applied for over 3,800 patents worldwide. With all its products and services, Bosch enhances the quality of life by providing solutions which are both innovative and beneficial. Bosch is celebrating its 125th anniversary in 2011. Additional information can be accessed at www.bosch.com, www.bosch-press.com, and www.125.bosch.com.

About Health Affairs

Health Affairs is the leading journal of health policy thought and research. The peer-reviewed journal was founded in 1981 under the aegis of Project HOPE, a nonprofit international health education organization. Health Affairs explores health policy issues of current concern in both domestic and international spheres

About Analysis Group:

Analysis Group provides health outcomes research and economic consulting to leading corporations and government agencies. (www.analysisgroup.com)

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ⁱ Baker, Laurence C., et al, "Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings." *Health Affairs*. 2011 Sep; 30(9):1689-97.

ⁱⁱ McCall N, Cromwell J, Urato C. Evaluation of Medicare Care Management for High-Cost Beneficiaries (CMHCB) Demonstration: The Health Buddy Consortium (HBC), RTI International Revised Final Report. 2011, Apr.

ⁱⁱⁱ Baker, Laurence C., et al, "Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings." *Health Affairs*. 2011 Sep; 30(9):1689-97.

^{iv} Ibid.

^v HHS Secretary Kathleen Sebelius. "Prepared remarks for delivery." 2nd Annual National Accountable Care Organization Summit. Washington, D.C. June 27, 2011, accessed on August 30, 2011, from

<http://www.hhs.gov/secretary/about/speeches/sp20110627.html>

^{vi} McCall N, Cromwell J, Urato C. Evaluation of Medicare Care Management for High-Cost Beneficiaries (CMHCB) Demonstration: The Health Buddy Consortium (HBC), RTI International Revised Final Report. 2011, Apr.

^{vii} *ibid.*