

## 3 Year Study Demonstrates Benefits of Content-Driven Telehealth in Reducing Mortality and Healthcare Costs

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- ▶ Analysis from the U.S.-based telehealth study of more than 1,700 patients published in well-known U.S. healthcare policy journal, Health Affairs
- ▶ New evidence demonstrates potential impact of Bosch Healthcare's Telehealth System in supporting the NHS goals to reduce costs and improve GP-led health service
- ▶ Care coordination supported by the Bosch Telehealth System resulted in reduced costs<sup>i</sup> and reduced mortality rate<sup>ii</sup>
- ▶ Study confirms the benefits of the Bosch Telehealth System previously demonstrated in studies in the Netherlands and U.S.

**Denham, UK – 10<sup>th</sup> November 2011** – Bosch Healthcare, provider of the Bosch Telehealth System, announced new evidence demonstrating that implementing telehealth-enabled care management programmes in physician practices for patients with chronic disease can help significantly reduce healthcare spending while improving mortality.

The U.S. study, entitled, *'Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings'* (Health Affairs, September 2011), explored the economic impact of using content-based remote patient monitoring such as the Bosch Telehealth System, (also known as Health Buddy in the U.S.) combined with physician-led, patient-centred care management for high cost patients with congestive heart failure, chronic obstructive pulmonary disease and/or diabetes mellitus.

The research reports on results from Phase I of the Health Buddy Programme, led by Laurence C. Baker, Ph.D., Chief of Health Services Research and Professor of Health Research and Policy at Stanford University who stated, "With this research, we wanted to examine whether the introduction of this programme led to changes in spending for targeted, chronically ill Medicare patients in the

traditional fee-for-service portion of the programme who were invited to participate,” said Dr. Baker.

“We are seeing similar results in the UK in our pilot in Barnsley PCT. The Bosch Telehealth System facilitates doctors and care navigators (nurses) to continuously monitor symptoms and improve patient knowledge – we can identify and intervene with at-risk patients more effectively which helps us to improve patient care and clinical outcomes”, commented Margaret Kitching, Clinical Director, Barnsley PCT.

Martin Ford, Head of Commissioning (for long-term conditions) at NHS Leeds says: “We welcome the results of this study from the US. This new evidence clearly demonstrates the added value that telehealth systems can have on reducing healthcare costs and improving quality of care among patients with long-term conditions.” “These innovative systems could enable the NHS to make significant savings over the coming years as we work to transform our services and further improve our efficiency and cost effectiveness”, he added.

### **Study Findings**

Researchers conducted an analysis evaluating changes in healthcare spending resulting from patient-centred care management supported by remote patient monitoring (n=1,767 patients) and demonstrated:

- Healthcare spending reductions of 7.7 to 13.3 percent (£197.17/\$312 – £342.52/\$542) per intervention patient per quarter over the two-year period studied<sup>i</sup>.
- Significant mortality differences between the treatment and control groups, which suggest that the intervention may have produced noticeable improvements in health outcomes. Mortality was not the focus of the study and further research is needed to explore these effects fully, the authors say<sup>i</sup>.

Under the guidance of physicians and nurses/clinicians, the Bosch Telehealth system provides patients with guideline-based content that delivers comprehensive patient education to improve patient self-management, while also tracking vital sign and symptom changes. These results, together with more than 14 other clinically-validated studies, support the value of the Bosch Telehealth System and differentiate it from most telehealth systems that are focused on vital sign/symptom monitoring only.

An ageing population and the proliferation of chronic disease are putting significant pressures on healthcare systems to deliver increased levels of care despite limited resources. In the UK alone, £16 billion is spent annually on treating chronic conditions like congestive heart failure, respiratory diseases and diabetes<sup>iii</sup>.

Ileana Welte, Regional Director of Bosch Healthcare in the UK said, “We are committed to working with the NHS to meet their goals by providing patients and their clinicians with technologies that support improved clinical outcomes and generate cost reductions. We are pleased that this latest study again validates the consistent evidence that Bosch’s Telehealth System has a unique impact on both the patient and the health delivery system. We are using this valuable, best practice experience to create programmes in a variety of sites in the UK. Results of these UK projects will be published in the near future.”

### **Background on the Medicare Programme**

The Medicare programme was conducted at Physician Practices in Wenatchee Valley Medical Center in Washington and Bend Memorial Clinic in Oregon. In the U.S., Medicare pays for the care of persons over the age of 64 years.

The care management teams at both clinics used content-based remote patient monitoring to improve communication with patients, monitor vital sign and symptom data and increase the patient’s knowledge about their health and chronic illness. Patient outcomes demonstrated improved care through reduced hospitalisations and improved medication compliance among other positive outcomes<sup>ii</sup>.

Sean Rogers, MD, the Medical Director of the programme 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.”

The Bosch Telehealth System has 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 system, and more than 50,000 patients actively using the system daily. “Content-based telehealth, like the Bosch Telehealth System, can activate collaboration and inspire engagement among patients and their care team,” said Jasper zu Putlitz, MD, President of Robert Bosch Healthcare. “Patients, healthcare professionals, payors

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.”

## **Notes to the Editor**

About the Bosch Telehealth System:

In use for more than ten years, the Bosch Telehealth System allows patients to take a more active role in monitoring their health and symptoms while at home. Patients receive a small device with four buttons and an easy to read screen for use in their home. Each day the system provides patients with a series of personalised questions and useful tips to help take better care of their health. Data generated by the system is sent via a telephone line, wireless modem or Ethernet connection to a secure data centre and quickly analysed, giving healthcare providers the opportunity to intervene before their patient’s condition becomes critical.

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 organisation. *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 in the U.S.

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**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. Additional information can be accessed at [www.bosch-telehealth.co.uk](http://www.bosch-telehealth.co.uk).

**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 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 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. The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as a "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information can be accessed at [www.bosch.com](http://www.bosch.com), [www.bosch-press.com](http://www.bosch-press.com), and [www.125.bosch.com](http://www.125.bosch.com).

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<sup>i</sup> Baker, et al, Integrated Telehealth and Care Management Program for Medicare Beneficiaries with Chronic Disease Linked to Savings.

<sup>ii</sup> 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.

<sup>iii</sup> Department of Health. Improving Chronic Disease Management. 2004. Available from [http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@eh/documents/digitalassets/dh4075213.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@eh/documents/digitalassets/dh4075213.pdf). [Last accessed 29 June 2011]