Mobile Health Device Links Patients and Healthcare Professionals Anytime, Anywhere

Cambridge Consultants announced a new product concept based on its low-cost Continua-compliant Vena platform. The Minder, powered by Vena, enables continuous, real-time medical data collection and transmission via cellular networks. Increasing the accuracy and frequency of patient data reporting, the Minder demonstrates a new technology solution that can lower the cost of healthcare by improving the quality of patient care.

Doubling as a pocket-sized digital patient checklist, Minder is a sophisticated gateway that captures wireless medical data and transmits it to a patient's online health record, creating higher volume and higher quality data for Electronic Medical Records (EMR). Moreover, Minder can receive real time updates to the checklist thereby enabling two way communications with healthcare professionals or caregivers, enabling more meaningful use of e-health records.

Usually, a hospital visit is required in order to record data, such as ECG or blood pressure readings, into a patient's EMR. However, as wireless-enabled medical devices continue to grow in number, the novel Minder device showcases a viable pathway for such readings to be acquired and transmitted remotely. For physicians and hospitals, this would provide access to more accurate data to work with, while increasing efficiency and decreasing unnecessary and expensive hospital visits.

For patients, the Minder takes the stress out of the often complex daily medication and monitoring regimen. With the goal of increasing compliance via user engagement, the Minder displays an interactive timed to-do list that can be customized for individual patients. For instance, the recovering heart attack victim can now transmit their blood pressure readings from home to their EMR in real-time. If the reading is high, the Minder could instantly alert a care provider who could have the patient carry out necessary steps by sending tasks back to the Minder. If the reading is on target, it could prevent an unnecessary hospital visit.

“The rollout of ubiquitous health monitoring is gaining traction. The question is not ‘if’ but ‘which’ technologies will take hold. Between the proliferation of countless health apps for smart phones and even the first Continua Certified smart phone, we are seeing an opportunity to drive a new market and lower health care costs via connected health solutions,” said Vaishali Kamat, Group Manager, Medical Technology, Cambridge Consultants.

“The other big question going forward will be: ‘How do I design a product in a smart way so that I can get it to market without regulatory hiccups?’ We believe the answer lies in standards-based technology such as Vena, which can provide reliable platforms for dedicated health devices. In the end, the companies that clear regulatory hurdles first will most likely dominate the market.”

The Vena technology used in Minder, leverages Cambridge Consultants experience with CSR’s BlueCore and Qualcomm’s Wearable Mobile Device (WMD) hardware and implements Continua Health Alliance standards for Personal Area Network (PAN) and Wide Area Network (WAN) interfaces.

Devices based on Vena can receive data via Bluetooth or USB from any Continua Certified devices and transmit this data via HL7 over cellular networks, thus empowering users to manage health and wellness anytime, anywhere. The Vena wireless healthcare software stack, embeds the Bluetooth™ Health Device Profile (HDP) optimized for the secure transport of medical data and the IEEE 11073 standards for compatible exchange of information between devices. Vena has been at the heart of Cambridge Consultants’ Vena family of devices – an inhaler, the VenaHub USB gateway, and core technology for A&D Medical’s wireless blood pressure cuff and weight scale. The Qualcomm WMD supports a variety of 3G networks and provides integrated GPS, and accelerometer and Bluetooth technologies.

With the ability to customize for different target populations – whether it’s individuals with chronic diseases, seniors living independently or those trying to fight obesity -- the Vena platform can support various device sizes, types, and complexities. Nevertheless, the Minder is a classic example of how a small gateway with a simple user interface can serve as a powerful and engaging tool for health management.

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