



Preventing Avoidable Hospitalizations: How Sentrian Is Raising the Bar for Remote Patient Monitoring

“The world is heading toward a model of continuous, connected care. The amount of data coming in is staggering. If we find a way to learn from that data, we can keep improving care models and intervention protocols and evolve from reactive hospitalizations to proactive informed care.”

– Dean Sawyer, CEO, Sentrian

CONTRIBUTING FACTS

Almost one in three Americans live with multiple chronic conditions (MCC)¹.

71¢ of every dollar of US health care spending goes to treating people with MCC¹.

\$17 billion of Medicare's annual readmission costs are estimated to be avoidable².

OPPORTUNITY

- Health care is moving toward value-based care models; Risk-bearing entities are looking for tools to reduce hospitalizations.
- The explosive trajectory of connected health and the Internet of Medical Things (IoMT) is projected to have a \$3.4 trillion impact on health care by 2025³.
- Scalable connected solutions in the home that can detect condition deterioration earlier could significantly impact the estimated 4.4 million preventable annual hospital admissions⁴.

“We leverage the 2net Platform for connectivity and integration, and virtually all our sensors are part of the Qualcomm Life Ecosystem. Most of our patients are elderly, so ease of use is key. They plug the 2net™ Hub in and forget about it. It just works.”

– Dean Sawyer, CEO, Sentrian

EXECUTIVE SUMMARY

Sentrian is a leader in remote patient intelligence, focused on significantly reducing preventable hospitalizations and readmissions by combining advances in biosensors and machine learning.

The Sentrian Remote Patient Intelligence (RPI) solution identifies patients through impact analysis, detects deterioration, and informs the patient's care manager so they can intervene before hospitalization is required. Data from one recent study suggests the solution is three times more accurate in identifying the deterioration patterns vs. first-generation systems, without increasing false alarms⁵.

The Sentrian solution integrates a deterioration algorithm that learns and adapts and uses condition-specific devices and remote connectivity to collect and analyze data to better predict the events that could lead to hospitalization. This closed-loop approach provides actionable insight earlier, expanding the intervention window from hours to days when compared to less sophisticated systems.

The company relies on Qualcomm Life's 2net™ solution to capture, transmit and protect device data, making it available to care managers in a timely manner. In addition, the broad range of biometric devices deployed by Sentrian are part of the expansive Qualcomm Life Ecosystem, simplifying connectivity and providing a range of gateways, including mobile, for patient monitoring in and outside the home.

Sentrian's longer-term objective is to leverage the emerging physiomic science and identify best practices for successful interventions, in order to drastically reduce the financial and human cost of hospitalizations.

2net is a product of Qualcomm Life, Inc.

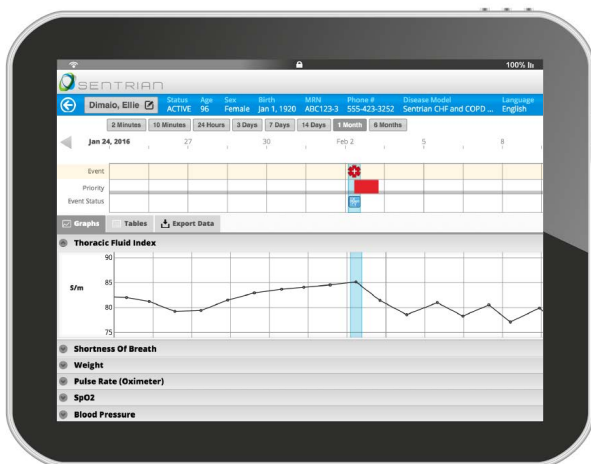
“Qualcomm Life is the leader in the connected health space. They have the largest connected ecosystem and the number-one gateway device out there. They are on the forefront of this emerging care space.”

- Dean Sawyer, CEO, Sentrian

Based in Orange County, California, Sentrian was founded with the goal of eliminating preventable hospitalizations through remote measurement and intelligent monitoring, combined with sophisticated machine learning. The company is focused on co-morbid subacute patients who are at risk for hospitalization or readmission.

Combining third-party wireless medical sensors with its own exception-based management tool, the Sentrian Remote Patient Intelligence (RPI) solution enables accurate identification of pre-acute events to lower costly interventions and risk. The solution can predict hospitalization with up to three times the accuracy of first-generation remote patient monitoring, according to a recent study conducted with Cedars-Sinai Medical Center.

The company collaborated with Qualcomm Life to recommend sensing devices for each of the chronic conditions for the approximately 7,000 patients enrolling this year. The devices deployed are part of one of the world's largest health care ecosystems that Qualcomm Life has assembled and integrated. Sentrian uses the 2net Platform to securely and reliably capture, transmit and share sensor data and analysis with care teams.



The Sentrian RPI identifies patients who are likely to have multiple hospitalizations in the next 12 months and whose outcome can be impacted. Each patient is assigned a disease deterioration model and a customized combination of biometric sensors. RPI's advanced algorithm detects deterioration early by monitoring the whole patient, tracking their co-morbid conditions and accurately detecting decomposition indicators, providing the care team with advance warning of risk. Sentrian's solution also increases operational efficiencies, with customers claiming they can now manage twice as many patients as before.

Sentrian serves an elderly population with an average age of 77. This patient demographic requires and demands an effortless out-of-box experience. Qualcomm Life's devices are set up and programmed to be plug and play and don't require network setup or pairing with medical devices. The 2net Hub integrates a wide array of short-range radios for flexible connectivity and allows 2net Hub service providers to push updates over the air directly to the hub, eliminating intervention by the patient while maximizing uptime.

The long-term goal for Sentrian is to be an integral part of the new digitized health care system by utilizing continual analysis and refinement of early indicators and interventions to better predict and care for their at-risk patient population. Sentrian hopes this closed-loop smart system will eventually widen the intervention window from days to months and even years, helping reduce costs and improve quality of life for their patients.

“Hospitalizations aren't just about cost,” says Dean Sawyer, CEO, “They're about pain and suffering. We're helping eliminate this from the equation.”

Learn more about how Qualcomm Life is powering intelligent care everywhere. Visit www.qualcomm.life.com.

Learn more about how Sentrian is redefining remote patient intelligence. Visit www.sentrian.com.

¹ Agency for Healthcare Quality and Research. Analysis of 2010 Medical Expenditure Panel Survey Data. (2013) Abt Associates | Anderson G. Chronic Care: Making the Case for Ongoing Care. (2010). Robert Wood Johnson Foundation | Chronic Conditions among Medicare Beneficiaries Chartbook, 2012 Edition. (2012). Center for Medicare and Medicaid Services | 2010 Census Data, U.S. Census.

² Centers for Medicare and Medicaid Services. Real-Time Reporting of Medicare Readmissions Data. Niall Brennan, Acting Director, Offices of Enterprise Management. February, 2014.

³ Strategy Analytics M2M Strategies Advisory Service, McKinsey Global Institute, 2013.

⁴ Jiang J., Russo A. Barrett L. Nationwide Frequency and Costs of Potentially Preventable Hospitalizations. Statistical Brief # 72. The Healthcare Cost and Utilization Project, April 2009.

⁵ WEAR-HeFT study conducted at Cedars Sinai Medical Center.