

# THE FIRST 5G-ENABLED MEDICAL CAMPUS: COLLABORATING TO DELIVER REAL-TIME CLINICAL PRECISION WITH MEDICAL VISUALIZATION TECHNOLOGY

Thomas Osborne, MD, is Chief Medical Informatics Officer at VA Palo Alto Healthcare System, and serves as Director of the National Center for Collaborative Healthcare Innovation. Toby Eduardo Redshaw is Senior Vice President of Enterprise Innovation and 5G Solutions at Verizon. They discuss how Verizon and the VA are working together to transform healthcare through cutting-edge technology.

## Why are Verizon and VA collaborating to build a 5G-enabled medical campus?

**Osborne:** VA has a long, impressive history of medical innovation: VA developed the first cardiac pacemaker, performed the first successful liver transplant, created the nicotine patch, and pioneered the electronic health record, among multiple VA innovations over the last 70 years. VA also established the National Center for Collaborative Healthcare Innovation, under the VHA Innovation Ecosystem. This new center is focused on developing effective veteran-centric healthcare solutions through strategic and complementary partnerships. Our Verizon-Medivis collaboration is an exciting example how we can pioneer the development of cutting-edge technology to improve healthcare.

**Redshaw:** No other industry has more at stake or has greater potential to be transformed by 5G than healthcare. Enabling clinical precision in near real time will lead to ideation and discovery. New technologies, advanced capabilities, and accelerated machine learning will transform diagnosis, care, and treatment. Solving the challenges of bringing 5G into a hospital setting and positioning it where it's critically needed is a high priority for our rollout team. When it came to identifying a healthcare provider who could work with us to architect in-building 5G capabilities and deploy real-world use cases, VA was an ideal partner. VA has a track record for leading the industry with innovation in both health IT and clinical practice.

## With so many waiting expectantly to see what 5G will deliver, where do you see the potential for healthcare delivery?

**Osborne:** This is perhaps the most exciting time in medical history. We face growing healthcare challenges, while at the same time, amazing technology is being developed that can dramatically advance care. Many of these technical tools are creating a wealth of valuable data that requires the next level of communications infrastructure. This 5G network could be to healthcare technology what the interstate highway system was to transportation and commerce in the 1950s. 5G from companies like Verizon creates an expressway for accessing, processing, and utilizing data that can dramatically improve our veterans' healthcare needs.



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**Redshaw:** A lot of hype and expectation is centered on the question: How fast will 5G be? But when we talk to our teams, customers, and partners about 5G, we're not just focused on speed. Yes, 5G is fast. It's exciting to see the look on a customer's face when they see that first speed test and realize what near-gigabit speed will mean to their businesses. But we'd rather talk about the transformative power of real-time intelligence, immersive education, remote asset operations, and edge computing. We know that 5G is as much about the removal of barriers as it is about the provision of speed. That's why we're excited about this partnership with VA and Medivis. We spend a lot of time in our 5G labs asking innovation teams, "If speed and latency were no longer a barrier, what could you do or build?" Verizon has extended an invitation to the industry to dream big and come build with us, and this partnership is a powerful RSVP to that invitation. We're looking forward to exploring a 5G horizon with the partners at the table because we know this isn't a one-time installation or enablement project. It's a shared interest in seeing where we can take innovation in the future, and how we can solve problems that need solving in healthcare together.

## What kind of real-world use cases will you be exploring and implementing together?

**Redshaw:** We have many use cases in ideation in our 5G labs, and we're committed to sifting through those use cases to find the ones where 5G is truly a differentiator — meaning, 5G is enabling things that can't be done on a 4G-LTE network. For healthcare, we know that the differentiating use cases are going to be those that rely on real-time precision, where a high confidence in speed and low-latency are critical to emergent intervention, informed clinical decision-making, and the data-guided application of care.

**Osborne:** The FDA-cleared software from Medivis allows us to transform two-dimensional medical scans into interactive three-dimensional models. With augmented reality headsets, a clinician could naturally manipulate data with nearly no latency. This could allow for improving care in numerous ways, from accelerated clinical training and intuitive patient education to presurgical planning and advanced surgical guidance. With this confluence of technology, we should have the ability to see inside a patient, understand the safest path, and therefore follow the most efficient approach that fosters rapid recovery. Moreover, we could share this information with colleagues, locally or nationally, and collaborate to provide our patients the best care for their individual needs.



## About Verizon Enterprise Solutions

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