



Care at a Distance

How COVID-19 is Accelerating Adoption of Remote Patient Monitoring



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The call for Americans to social distance due to the COVID-19 pandemic has increased the need for remote patient monitoring and raised awareness of its benefits in ensuring the safety of the chronically ill and effectively managing disease. Remote patient monitoring is increasingly being incorporated into care pathways as payers and providers have come to understand how it can optimize outcomes and reduce hospital readmissions.

In a discussion with Modern Healthcare Custom Media, two industry leaders discussed the importance and benefits of remote patient monitoring and offered their opinions on its role in healthcare's rapidly changing future.

Bilal Muhsin is the chief operating officer at Masimo. Previously EVP of Engineering, Bilal has served the company for more than twenty years. As COO, he oversees operations and sales company wide.

Lou Silverman is CEO of Advanced ICU Care, and has a 25-year track record of success in healthcare services as CEO. During his tenure, Advanced ICU Care has grown to deliver acute care telemedicine services in approximately 100 hospitals in 26 states.

COVID-19 capacity and safety challenges have dramatically increased the need for remote patient monitoring. What did it take to rapidly upscale operations?

BM: When it became apparent how severe the pandemic was going to be, we mobilized. We had recently been granted breakthrough device status from the FDA for an at-home monitoring system to support the opioid crisis. In light of the pandemic, we refocused that system to support COVID-19 care efforts. The new system combines pulse oximetry, respiration rate, and temperature measurement with a cloud-based patient surveillance platform and patient app.

LS: Fifteen years of experience and expertise in working with 100 ICU clients nationally were key to rapid COVID-19 services deployment by Advanced ICU Care. Fear and

uncertainty were everywhere. Efficient analyses of client needs, a rapid presentation of additional clinical options, an encyclopedic knowledge of technology alternatives and a remote implementation capability were additional elements driving speed and success of tele-ICU surge support.

What lessons have you learned during the pandemic, and how do you expect remote patient monitoring to be different once the COVID-19 pandemic is resolved?

BM: The pandemic has accelerated the adoption of remote monitoring and telemedicine solutions. This is a significant step forward, but it's critical to recognize that many new remote monitoring technologies on the market lack the accuracy and reliability of the technologies typically used in acute care settings. For remote monitoring to be a viable

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solution in the future, we must make the same technology found in hospitals available to the home.

LS: We've confirmed the benefits of RPM and have seen an exponential increase in the care venues integrating RPM into their care delivery strategy. We have rising interest in our flagship ICU service as well as newer service lines – including in-patient cardiac telemetry and post-acute services. We have witnessed RPM's graduation—with honors!—from a care niche to a core care platform. We expect the current momentum surge to continue.

How important is interoperability to remote patient monitoring, and where does the industry stand in advancing interoperability to realize RPM's full potential?

BM: Interoperability of data can accelerate innovation in remote patient monitoring. In the hospital, the industry has created communication standards and middleware to integrate medical devices with EHRs. But that's just one destination for medical data. We are seeing clinicians demand new applications of data, such as analytics, decision

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support, notifications, and surveillance visualization. These types of automation depend on interoperability.

LS: The premise of your question is correct in that coordination of inputs and outputs from a variety of sources is a critical element of RPM success. We have leveraged insights drawn from our 15 years of experience into our own proprietary workflow management software suite, allowing us to be brand agnostic to the range of devices, EHRs and other components that we encounter daily in working with approximately 100 hospitals across our service lines.

Clinician shortages are a struggle for providers across the country. How can providers best leverage remote patient monitoring to optimize staffing and ensure efficient care?

BM: Remote monitoring allows clinicians to keep an eye on each patient's clinical trajectory, so they can intervene as needed based on the data they are receiving. But for RPM to really make a difference, it must be rapidly scalable—from 10 patients today to 1,000 tomorrow. Moreover, the platform needs to be intuitive and easy to use for everyone, so that even with staff turnover, the system is not burdensome to manage and maintain.

LS: We have adopted a strategy of leveraging technology to efficiently distribute clinical expertise. Today, we deliver clinical expertise and RPM services through nine clinical operations centers. These centers behave as a single unified clinical practice. Through this large and growing structure, we can leverage skilled resources where they are, and use technology to, in effect, deliver this expertise to locations where there is an unmet need.

Industry consolidation has highlighted the benefits of centralizing services. What strategies can you share for health systems that may be looking to optimize the use of remote patient monitoring across multiple facilities in a growing organization?



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¹ Clinical study abstracts presented at scientific meetings and peer-reviewed journal articles can be found on our website at <http://www.masimo.com>.

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Lou Silverman



BM: When combined with new hospital automation technologies and remote patient monitoring, consolidation enables smaller health systems to serve larger and more diverse populations than before. To realize the full potential of remote monitoring across multiple facilities, health systems will need to develop an entire ecosystem—including logistics, technical support, and troubleshooting—devoted to delivering a seamless care experience.

LS: We have seen a significant, multi-year surge in systems successfully pursuing “system-ness” among a distributed, often multi-state network of facilities. We have seen heightened interest in pursuing the scale benefits of centralized and partnered RPM to capture the advantages of capacity maximization. The result is a range of solutions which complement hospital staff to effectively deliver optimized care leveraged in part by RPM.

What best practices can you share for ensuring a positive patient experience for patients who are being observed through remote patient monitoring?

BM: While remote monitoring has many benefits, it is not the same as in-person care. However, remote monitoring can improve the patient care experience by reassuring patients that while they may no longer be in the hospital or clinic, they are still under the supervision of a medical provider. To ensure the patient experience remains positive, the technology needs to be simple and intuitive to use and function without complications or disruptions.

LS: Communication. Patients and bedside teams must know in advance what to expect and how they will benefit. RPM teams must be trained to deliver care in a remote setting and in collaboration with teams at the bedside. Interpersonal and attitudinal skills are vitally important adjuncts to clinical expertise in this environment. The expression “people don’t care how much you know until they know how much you care” is a constant in the RPM world.

As virtual health technology continues to advance and adoption grows, what technological advances are you most looking forward to in the next five to ten years?

BM: In the next ten years, remote monitoring technology will graduate from a novel technology with functional limitations to hospital-grade, at-home monitoring solutions that deliver the same quality of care to high-acuity patients as they receive in the hospital. Masimo is at the forefront of this initiative, and within the next decade, our pioneering approach will have fully proven its value by having a positive impact on patient outcomes.

LS: We have an innovation wish list and won’t wait 5+ years to implement it! The vexing problem of alert fatigue is a good use case for AI and machine learning. There is a need to address the expanding challenge of data security with agility. The need for lighter technology footprints which enable rapid and flexible deployments continues. Patient needs will increase unmatched by provider supply. Technology-enabled RPM is the required force multiplier.



There are Visionaries.
There are Doers.
WE ARE BOTH.

HIGH-ACUITY TELEMEDICINE SERVICES

Advanced ICU Care is the leader in acute care telemedicine, offering tele-ICU, remote inpatient telemetry, and post-acute patient monitoring with expertise drawn from nearly 15 years of experience and care for more than half a million patients.

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