

# Healthcare Tech OUTLOOK

HEALTHCARE TECHNOLOGY  
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**SURGERY  
SOLUTIONS**  
EDITION

REIMAGINING  
PREOPERATIVE  
READINESS AND  
ENHANCING  
REVENUE

**Lumeon**

ROBBIE HUGHES,  
FOUNDER AND CEO





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## REIMAGINING PREOPERATIVE READINESS AND ENHANCING REVENUE

**P**reoperative readiness is the stepping stone for surgery success. It ensures the patients are ready and in optimal condition for their surgery. It is also important for reducing the postoperative complications, length of hospital stay, readmissions and helping them recover faster. At the core of preoperative readiness lie the patient's history and physical examination, focusing on cardiac and pulmonary complications and determining a patient's functional capacity. Today, most healthcare providers evaluate the preoperative readiness of a patient using numerous nurses, in person appointments, and outbound calls to boot. As a result, all patients are largely treated the same and are put through a heavy duty, and costly, preparatory process. Nurses, physicians, anesthesiologists, and surgeons end up working in their functional silos, lacking a holistic view of the patient status, their readiness, who has the ball, and what needs to be done next. In other words, a fragmented care pathway, that negatively impacts the patient experience and surgery outcomes.

Lumeon, a digital health company, based in Boston, has a solution that's proving to be a big hit. Its enterprise platform automates and orchestrates care delivery processes resulting in simple, attractive, highly coordinated, and efficient consumer experiences – and one of its biggest advantages is that it does this across many scenarios, from first referral, to readiness, to admission, and recovery at home. It does this through a unique combination of patient engagement, care coordination, and graph-driven decision support, seamlessly connecting patients with care teams to create an efficient care journey. It enables providers to solve the underlying issue of care fragmentation, helping healthcare professionals work together more efficiently and effectively. “Our clients see a lot of other vendors fail as they are limited to patient engagement. They miss the point that

decision support and care coordination capabilities are also critically important to truly join up care delivery and make patients equal participants in their care,” states Robbie Hughes, founder and CEO of Lumeon, who has been pioneering software platforms to orchestrate and automate healthcare for over a decade.

The Lumeon platform incorporates a powerful pathway engine that pulls data from the EHR and dynamically personalizes the care experience for patients while guiding the care team along the way. The platform helps engage the care team to execute the right task, at the right time, for the right patient. In the case that a patient does not respond or is not compliant, the platform automatically nudges the patient or falls back to other communication channels to get the desired response.

**“ Our platform takes the operationalization of care plans beyond the four walls of your hospital and empowers you to virtualize the preoperative readiness process to the fast track patients. It’s a single place to deploy, monitor, and optimize a multitude of patient care journeys ”**

The pathway engine also assists with rapid decision-making, triage, chart review, assessing gaps in care, and enables the care team to launch actions, such as patient instructions or a survey. For example, one of the reasons for late cancellations is that the decisions are not made in a timely fashion. The platform can quickly monitor whether these decisions have not been made well ahead of the surgery date and immediately escalate the issue. “Lumeon combines a powerful blend of capabilities to operationalize care plans beyond the four walls of the hospital. For elective surgery, we have demonstrated that we can fast track up to 89% of patients using virtual care techniques, while increasing care team capacity by 60% - this has resulted in a marked improvement in patient experience, reduced patient anxiety, and a lower cost of care,” remarks Hughes.

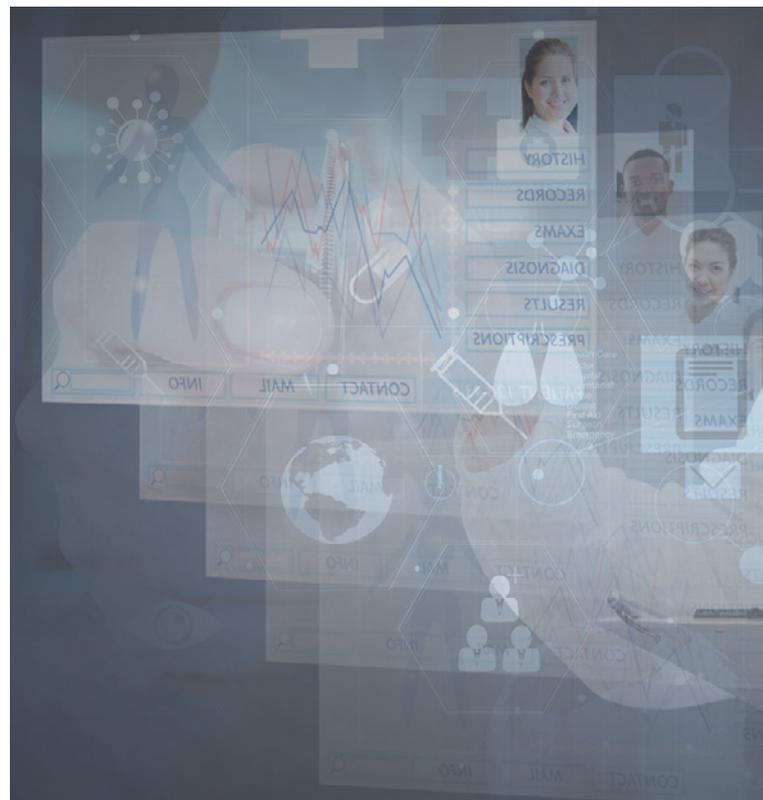
In the context of surgery, the platform acts as a surgical command center. It’s a single place to deploy, monitor, and optimize a multitude of patient care journeys. It gives equal importance to the frontend and

backend processes, enabling care teams to manage referral, readiness, discharge and follow-up processes. “As a result, our platform is an end-to-end coordinated surgical orchestration solution catering to both patient and care sides of the equation,” states Hughes. Such complete care delivery is possible due to the pathway engine’s exceptional flexibility to consolidate and connect many solutions from simple reminders, evaluation, and instruction, to comprehensive preoperative readiness and postoperative follow-up, all managed through a single platform.

By partnering with Lumeon, clients can increase patient flow and nurse utilization, reduce late OR cancellations and delays, improve the accuracy and appropriateness of lab test orders, satisfy patient compliance to ERAS protocols and preoperative home instructions, and enhance the overall patient experience while reducing patient anxiety. All these aspects positively impact the top and bottom line of the healthcare provider, leading to higher margins.

### **Supporting Return to Revenue Efforts in the Age of COVID-19**

After weeks of explaining the importance of social distancing and other efforts to limit viral transmission, hospitals must now allay fears and show consumers that it is safe to return. To this end, the platform helps care providers quickly adopt virtual care journeys to in-still greater confidence in patients through proactive outreach based on assessing anxiety and concerns,





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demonstrating their environments are infection-free, and minimizing non-essential in-person visits and tests. Part of establishing this involves reassuring patients that they can stay at home to prepare and recover, only going into hospital when necessary.

This is one of the reasons that Lumeon's cloud-platform has turned into a silver lining for providers, as it helps transform the traditional in person experience into an automated, hybrid care experience. "Many patients are fearful of entering hospitals and surgery centers due to safety issues and are either postponing or skipping the surgery, which is impacting revenue streams," says Hughes. As a result, surgery centers are doubling down on their efforts to recover their revenue, get patients back, keep them safe, and lower their anxiety levels. Providers have deployed a video or voice conferencing service to talk and engage with patients, but the care experience around this is often broken and fragmented, simply replacing existing visits with video visits, not selectively determining suitability for the visit in the first place, or putting the governance around it to ensure it is done safely, and only for the right patients.

As a result, the clients struggle with point solutions that are good at managing one aspect but fail to scale to offer an entire experience. This is where the platform comes to their rescue by enabling them to provide the patients safe, contactless care through virtual communication, assessment, triage, screening, instruction, signposting, check-in, and monitoring before, during, and after surgery, covering the entire continuum of care.

Getting patients back on-board is, of course, only half the battle. To this end, the platform helps hospitals ensure that patients remain committed and compliant throughout the run-up to surgery as well as anticipating discharge risks in advance. This helps guide the unprepared and anxious patients, keeping them at home in the majority of cases, alleviating their concerns upfront, while comprehensively preparing them for the procedure, and ensuring that there is a shared plan for discharge, thereby preventing the last-minute surgical cancellations and optimizing the discharge process – both key areas that have a substantial financial impact. It also helps prevent unacceptable consequences for patients who may accidentally expose themselves to the virus by educating them to follow appropriate guidance. "How quickly health systems respond to the current challenges will impact their performance in years to come and shape their future relationship with healthcare consumers and care professionals. Those who act quickly will soon become exemplary beacons of virtual care and the advantages it brings," says Hughes.

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**To support physical distancing and reduce the risk of COVID-19 exposure at our facilities, we used Lumeon’s platform to create a virtual check-in process, which keeps patients waiting outside of the facility until their physician is ready to see them for their appointment ”**

### Examples of Transformative Consumer Experiences

In one customer example, the Lumeon platform delivered ‘immense’ revenue savings for USC’s Keck Medicine by automating the patient access experience. This health system based in Los Angeles experienced a few years of dramatic growth in patient volume and geographic footprint, with numerous ambulatory locations and partnerships with hospitals in Los Angeles, Orange, Kern, and Tulare Counties. To help optimize the availability for a large patient population, many of whom require complex, specialized care, Keck needed to minimize appointment no-shows and late cancellations. At the time, its IT systems required staff to enter appointment details manually. This process did not integrate with the electronic health record and provided limited visibility into what was going on during patients’ real-time care journeys. On top of that, staff were looking for stronger levels of customer support. Further, Keck needed a solution that would be adaptable and scalable—something that would be capable of taking on expanded features and additional use-cases (beyond initial patient notifications) over time, particularly as Keck’s 10-year-old health system continues its dramatic growth trajectory.

Lumeon proposed a multi-layered solution for the client to address all these needs. The company offered its platform that integrated with Keck’s Cerner EHR and automated the patient journey, starting with text message visit notifications. With this solution, Keck reduced its no-show rate from 7 percent to 5 percent. By managing approximately 100,000 appointment reminders per month, the company realized material revenue improvements. Besides, the automation alleviated the manual work that the staff were doing in scheduling appointments, following up with reminders, and rescheduling no-shows, enabling staff to focus on

other, higher-value tasks. “Over time, as we identified other processes that could improve with automation, Lumeon consolidated these services into a single technology platform,” says Laurie Johnson, the chief ambulatory officer at Keck Medicine of USC. She further adds, “To support physical distancing and reduce the risk of COVID-19 exposure at our facilities, we used Lumeon’s platform to create a virtual check-in process, which keeps patients waiting outside of the facility until their physician is ready to see them for their appointment.” During the first ten days that the system was live, 67 percent of eligible patients used the system to check in virtually for their appointments, avoiding congestion in the outpatient facility during COVID-19. “Once we fully deploy the virtual check-in solution across the health system, we can safely manage check-ins for more than 80,000 patients per month,” says Johnson.



Because the platform is integrated with Keck’s Cerner EHR, all reminders are in sync with the latest patient information. For example, if a patient cancels an appointment, the reminder is automatically canceled. If a patient has multiple appointments on the same day, then the system only sends one reminder to cover all of them. “This level of automation improves efficiency and lowers the burden on our staff, reducing the likelihood of errors as a result,” says Johnson. “It also cuts costs by ensuring more patients come to their appointments, or cancel or reschedule with sufficient notice so the system can then fill those empty slots,” she adds.

### Building a World Where Healthcare Delivers the Best Outcome for All

Lumeon, for more than 13 years, has been spearheading a quiet revolution in healthcare with its platform. The company counts some of the world’s largest providers as its clients and is deployed with more than 70 customers across the US and Europe. Lumeon brings expertise, technology, and experience together in an award-winning combination that’s proven to deliver success at scale. **HT**

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