Optimising the care pathway for better outcomes

Freeing-up time for patient care

Alcatel·Lucent
Enterprise

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Overview

As the healthcare industry recovers from the pandemic, there remain a number of hurdles ahead. The backlog of medical procedures, the high staff burnout and associated exodus, the ongoing ageing population, and a monkeypox outbreak, to name a few, all while patients expect a better experience and outcome.

Freeing-up time for patient care is a necessity — perhaps more than ever before. For governments/public healthcare providers who want to provide quality care, and private healthcare providers who want to survive, improving the efficiency of care delivery by optimising the care pathway is the only way forward — however — the range of efficiency improvement required, varies from 10 to 25 percent.

The road ahead

What the pandemic has taught us is that digital transformation in healthcare is a viable path, and that staff and patients are willing to endorse the strategy, provided they see benefits including a better experience for patients and a simplified work environment for staff. Without these improvements, digital is not a given.

Digitalisation is about connecting the dots of siloed information, creating connected data points and using that new data to make care pathways more efficient. However, healthcare transformation is about more than just technology, it's about relevant and adopted solutions co-constructed between end users (patients, clinical staff) with a thriving ecosystem of partners working hand-in-hand to solve issues and improve patient care and outcomes. It is about offering openness to care providers so they can move forward in their digital transformation roll-out, step-by-step, without interrupting operations or requiring large investments.

Today there are number of digital transformation strategy tracks underway, including population health management and telehealth, however, this document will focus on the digital transformation of hospitals as it pertains to caregivers and patients.
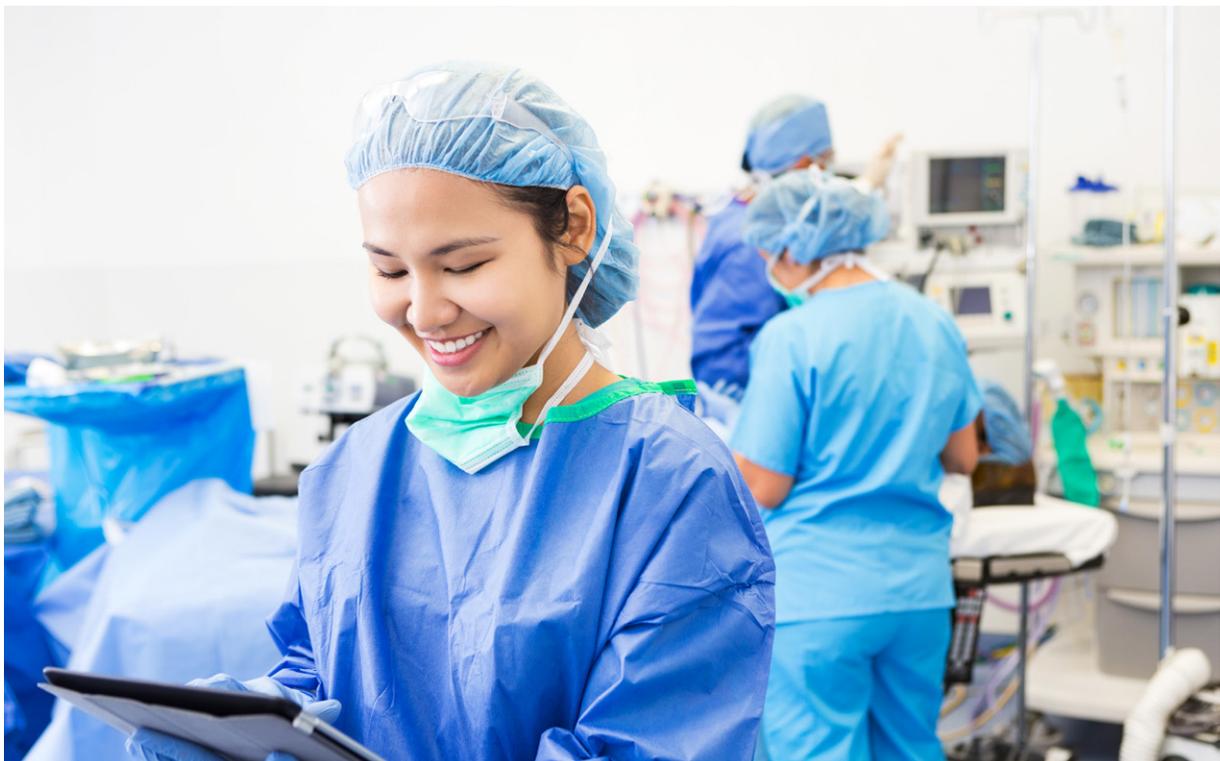
Hospital digital transformation for caregivers and patients

Where we are today

As clinical research and medical treatments continue to advance, there are areas in the healthcare industry where digital transformation is just getting started.

The Electronic Medical Record (EMR), or patient record, a much needed and important transformation to enable collaboration between doctors and to reduce medical errors, also created the data points required for analytics which will provide an in-road for Artificial Intelligence (AI) work in the future.

A lot has already been learned from the first generation of EMR. While the outcome has been impactful, attention has shifted from the patient to the EMR system. For example, in the early days, access to the EMR was very static using a PC on a desk or a computer on wheels. Studies suggest even now, nurses spend from 20 to 40 percent of their time on the EMR platform.

In addition to the time spent on the EMR, nurses' walking distance and walking time has increased by approximately 15 to 18 percent, per shift. As if that wasn't enough, there is also an uptake in the number of medical devices connected to patients which means more time looking for even more equipment. Additional research indicates that nurses spend 10 to 14 percent of their time searching for people and equipment. As hospitals become more automated, with the addition of digital tools and food delivery robots, patient expectations are increasing creating a new issue of alarm fatigue for nursing staff.

As digital transformations continue, we need to ensure that we maintain focus on nursing and to optimise the care pathway for improved outcomes.

Key areas to address

Digital transformation is about helping hospital staff execute their functions, by digitalising or automating repeatable menial tasks. However, research and feedback from the nursing teams today, indicate the current generation of digital tools has actually increased workloads, resulting in a reduction in patient care time and contributing to the increased burnout rate of nurses.

Addressing this situation requires a holistic approach. Areas that need to be addressed include:

Mobility — everything must be mobile: A toolbox, in the hands of the nurse, at the point of care is required. The new generation of EMR systems are providing applications for smartphones what will have a positive impact. While EMR is intended for clinical usage, we need to consider facility integrations and integrations between facility and clinical usage. In addition to integrations, mobility also requires a very secure and dynamic Wi-Fi network so hospital staff, patients and the mobile devices they use can roam without worrying about cybersecurity.

Integrations of all silos: Today, nurses use a number of different tools such as call systems for patient-nurse interface, telephone systems for inter-departmental communications, building tools to control lights and temperature, medical devices such as monitors and infusion pumps, as well as accessing patients' medical records. All these tools use different interfaces located in different locations. Integration, together with the ability to move about freely, provides a major step toward efficiency.

Enabling process improvements: While integration is important, there are other areas we need to consider as well. Having location information can improve efficiencies, for example when we know where the staff/nurses are, we can notify those closest to the incident in the event of an emergency, or, we can track down the closest medical equipment when required. Additionally, new collaboration tools can let staff know if a doctor is available for a quick call with a patient before the call is made. Implementing alarm notification and messaging services, can reduce the number of alarms, and push each alarm to a personalised workflow with specific intelligence to help reduce alarm fatigue. Integrating new services further improves efficiencies. One example of process automation, enabled by the above technologies, would be a simple press of a button by the nurse to indicate that a piece of equipment requires attention

which would send out an alert to the repair team with the equipment location info for repair. Staff duress notifications can also help protect your staff against the increasing levels of violence, and location services can help protect against equipment loss.

Closing the loop with the patient: Depending on the type of care or ward, patients can be part of the transformation process. Today all beds are equipped with only one patient care tool — the red call button. While simple to use, each press of a button can create a mini chaos for the nursing team. Is it a medical emergency? Or just a request to turn off a fan? Because the reason for the call is unknown, everyone at the nursing station is interrupted, which can result in frustration between care teams. Providing patients with options is next on the transformation agenda. This will allow for a separation of workflows pushed to the assigned skilled caregiver, eliminating overlap and improving the patient experience.

The Alcatel-Lucent Enterprise vision for nursing teams

Alcatel-Lucent Enterprise has a unique vision for addressing nursing teams' challenges, based our technology building blocks.

Our vision

The goal of optimising the care pathway for better outcomes is supported by three digital transformation streams:

Figure 1. Optimising the care pathway for improved efficiency
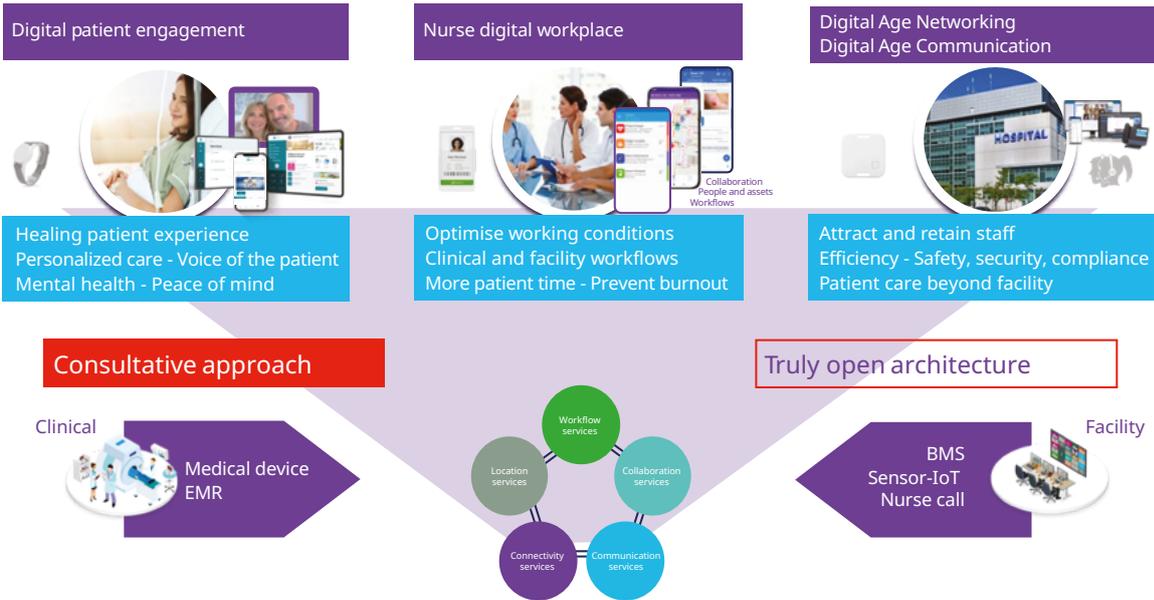
Digital patient engagement: With our specialised partnerships, provides patient choices, ranging from a simple patient interface for long stay nursing homes, to refined 360-degree patient engagement. It can be implemented before coming to the hospital, cover the stay, and support any post-hospital care. It can be fully integrated with clinical workflows and adapted to each patients' medical condition.

Nurse digital workplace: An open ecosystem integration platform delivering all the facility's interfaces enriched by clinical tools into the nurses' hands. Our consultancy services help you select the right digital transformation aligned with your needs.

Digital Age Networking and Digital Age Communications: Provides the technology building blocks (for example; digital workplaces, connectivity, flexible models, autonomous networks, IoT, business automation with automated workflows) to support the above streams. This equipment provides a secure mobile infrastructure for medical devices and smart devices like PC's and smartphones. It supports the data flow and provides the foundation for all communications and collaboration for the location services.

Alcatel-Lucent Enterprise communications and network solutions are optimised, enabling your support staff to efficiently manage the infrastructure.

Conclusion

Alcatel-Lucent Enterprise is committed to creating an open healthcare ecosystem, enriched with integration capabilities and healthcare partnerships.

Learn more about our healthcare offering and discover how our customers around the globe are optimising their care pathways to deliver better patient outcomes.

To discuss this topic further feel free to reach out to Mr. Dirk Dumortier, the author of this white paper, to learn how you can start your digital transformation today.

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