UNLOCKING VALUE WITH THE NURSE OF THE FUTURE

How healthcare leaders can use technology to tackle the nurse shortage and transform the care experience
NURSING IS THE LARGEST HEALTHCARE PROFESSION—AND GROWING FAST

Nursing leaders are facing numerous challenges that can trap value within a healthcare enterprise. Nursing is the nation’s largest healthcare profession and is expected to grow faster than the average of all occupations, and at least by 15% by 2030.¹ There are 4 million nurses in the United States, which comprises one-third of all healthcare professions.²

While the profession is growing—so is its talent gap. The nursing talent shortage indicates an inequitable distribution of the nursing workforce across the United States, representing an acute problem at the state level. California, Texas, New Jersey, South Carolina and Alaska have the largest projected shortage of nurses by 2030.³

Figure 1. Employment of registered nurses is projected to grow 15% from 2016 to 2026, much faster than the average for all occupations.

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<tr>
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<th>2016-2026</th>
<th>2016-2026</th>
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<tbody>
<tr>
<td>Health diagnosing and treating practitioners</td>
<td>16%</td>
<td>16%</td>
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<tr>
<td>Registered nurses</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Total, all occupations</td>
<td>7%</td>
<td>7%</td>
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Note: “All occupations” includes all occupations in the US economy

² Ibid
NURSES ARE UNDER IMMENSE PRESSURE

Nurses are burning out and it is costing the US health system between $9B to $14B annually⁴. A noteworthy 35% of nurses reported burnout, which can have impact on quality, safety and healthcare system performance.⁵ Twenty-four percent of ICU nurses tested positive for symptoms of post-traumatic stress disorder, and 26% of emergency nurses and 30-35% of oncology nurses are burned out.⁶ Interestingly, nurses who perceived a high level of reliance for tasks reported more burnout.

Technology applied to simple, low-value tasks can minimize the burden placed on nurses, and more nurses are open to it. The nursing workforce is evolving, trending toward a younger, more educated group of professionals eager to adopt digital ways of working, such as artificial intelligence (AI) and robotic processing automation.

Some are going so far as to seek out hospital systems that embrace technology. Those with a Bachelor of Science in nursing (BSN) or equivalent gravitate toward hospitals with technically sophisticated work. 63% of nurses aged 18-30 and 51% of nurses aged 40+ have bachelor’s degrees.⁷

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⁵ Journal of the American Board of Family Medicine; January to February 2018; http://www.jabfm.org/content/31/1/83.long
⁶ Ibid
TECHNOLOGY CAN CHANGE THE PROGNOSIS

Given the growing need for nurses, the rising shortage of talent and the increase in burnout, the future may look bleak for nursing—but technology can be the key to unlock value that is currently trapped in the enterprise.

Automation technology in nursing can free up 20% of repetitive, lower complexity tasks and unlock ~$50B in potential annual value, according to our estimates.\(^8\)

These are just some of the daily tasks that can be automated to free time up for nurses:

- **Taking vitals from same patients multiple times throughout their stay**: Vitals are monitored automatically and alert nurse when necessary.
- **Writing down patient data and then entering it into the data system**: Nurse can enter data once into a tablet and will upload to system.
- **Continuously monitoring supply stock and placing orders when low**: Supply stock is automatically monitored and places orders when low.
- **Taking notes and transcribing them into the data system**: AI systems listen to clinician and patient conversations and take notes, which are uploaded into the system.

In the near future, nurses could be using a variety of cutting-edge technologies to optimize workflow and enhance the patient experience throughout the day—helping patients rather than staring at computer screens. Some pioneers in the industry have already begun to use technology in myriad ways to eliminate wasted time, improve the patient experience and avail precious time for higher value activities.

A new technology-enabled Stanford Health Care facility is using automation to improve productivity by introducing IoT, robotics, mobile remote monitoring and automated guided vehicles. For instance, sensors will track the location of staff and equipment in real time, improving efficiency and inventory control and allowing staff to focus on more value-adding activities.\(^9\)

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AS HEARD IN THE FIELD

We interviewed nurses to understand their pain points and views on technology advancement in hospitals. These quotes are samples from a broader set of interviews.

"Technology can chip away at the human aspect of nursing when you’re staring at a monitor all day." - Patient Engagement

"My patients feel good about receiving care at a hospital with state-of-the-art technology." - Patient Satisfaction

"Technology is a double-edge sword. It has the greatest potential but can’t replace the human touch." - Human + Machine

"Nurses must leverage technology more for administrative tasks to mitigate the risk of paperwork fatigue." - Paperwork Fatigue

"My patients are typically not digital natives but I’m surprised by how well they’ve adapted to our virtual care services." - Tech Adoption

"We are at our computers everyday, it’s important for nurses to be tech literate." - Tech Literacy
HOW TO BEGIN DEVELOPING NURSING OF THE FUTURE

Challenges in nursing didn’t crop up during a single shift, nor will they be remedied that quickly. However, these important steps will help your health system to begin preparing for the future:

**UNLEASH HUMAN POTENTIAL**

Powered by advanced technologies, nurses can be unburdened by mundane tasks via workload and staffing optimization programs. These strategic workforce planning efforts combined can support attracting, developing and leading the nurse of the future through disruption. By reimagining the role of nursing and investing in human-machine collaboration, unprecedented insights into diagnostic, care delivery and outcomes can be unleashed.

**RECRUIT THE RIGHT TALENT**

The growing shortage of nurses requires health systems to act fast to find the right people to sustain the nursing workforce for the future. This includes tailoring outreach strategies to attract candidates that are digitally savvy and understand the value of the human touch in a world of advanced technologies. Allowing potential nursing candidates to experience a technology-enabled “day in the life” can be a productive approach for health systems to assess the right applicants early on during the recruiting process.

**SKILL FOR GROWTH AT SPEED**

Realize the full potential of human+machine and equip nurses with the right skills that help organizations pivot to the future. Re-evaluate traditional talent strategies to account for new skilling that will be required for growth. Technology literacy, learning agility, problem solving, interprofessional collaboration and resource management skills will all be critical for success as a nurse of the future.¹⁰

Health systems can foster these skills by offering more virtual training opportunities where nurses have the flexibility to access training from any location and any device. By personalizing training pathways, nurses can also focus on key areas for their roles.

¹⁰ Accenture Strategy 2030 Nursing Workforce Research, 2018 Accenture, It’s Learning, Just Not as We Know it
Nurses are the key to unlocking value in a hospital system. A strong nursing workforce, enabled with the right technological tools to make their jobs easier and more rewarding, will contribute to more streamlined operations and better collaboration within the healthcare enterprise. The opportunity is there. It is time to start building your nursing workforce of the future.

A DAY IN THE TECH-ENABLED NURSE LIFE

With the help of technology, an emergency nurse at an academic medical center might have a day that flows like this:

- Clocks in via an app on her cell phone
- Reviews patients’ AI-enabled EMRs
- Performs rounds with robotic assistance
- Educates high-risk patients on how to use monitoring apps
- Meets with patients through video calls
- Discusses patient’s status with the entire medical team via comms platform
- Navigates to new hospital café using a wayfinder app
- Refers patients to their nearest, preferred clinic
- Sends home health kits
- Clocks out via an app on her cell phone
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