



People empowerment across the care continuum

How health systems can leverage
Intuitive's ecosystem to better optimize
OR staffing models

Healthcare has a people problem

For years prior to the arrival of COVID-19, hospitals in various corners of the nation experienced troubling shortages¹ of medical staff, a problem that has been exacerbated by COVID-19.

Amid the extended strain of a multiyear pandemic, healthcare workers have left the profession in droves. Estimates suggest nearly one in five healthcare workers left their jobs during the pandemic, according to an oft-cited survey² conducted by the Morning Consult. In addition to the 18 percent of healthcare workers who quit their jobs, another 31 percent said they had considered leaving, and 79 percent of healthcare workers surveyed said workforce shortages have affected them at their organization. Additionally, according to a study published in Mayo Clinic Proceedings: Innovations, Quality & Outcomes³ one in three of the physicians and nurses who plan to remain in healthcare intend to reduce the number of hours they work.

These two studies suggest today's health systems are staffed with fewer workers, and that those workers remain concerned about their workload after serving on the frontlines of a pandemic that has left many of them grappling with anxiety, depression, and burnout.

Healthcare's workforce crisis is a major problem for health systems and the communities they serve.⁴ The crisis is pushing leaders to rethink long-term strategies⁵ related to training, education, recruitment, and contingency planning. In the near-term, health systems must make immediate adjustments⁶ to staffing models and learn how to utilize new technology⁷ to better support care teams.

Health systems with minimally invasive surgery programs are leveraging the sophisticated capabilities of modern robotic surgery platforms and implementing new staffing models to help alleviate staff burden and optimize OR performance. The following ebook comprises operational lessons from three such health systems.

NGMC

A Center of Excellence for
robotic surgery.

23

Operating rooms.

10,000+

Procedures on patients using da Vinci
robotic-assisted surgery systems.



Lessons from Northeast Georgia Medical Center

"By taking a service line approach it has afforded us better communication and collaboration across stakeholders. Looking at our program this way supports efficiency and we're able to look at the data to validate our approach."

Courtney Emory

MSN, BA, RN, CNOR, Manager of
Surgical Services
Northeast Georgia Medical Center

Northeast Georgia Health System serves the greater Atlanta metropolitan area across four hospital campuses. Its flagship hospital in Gainesville has 23 ORs, and it was the first hospital in the state to earn designation as a Center of Excellence⁸ for robotic surgery. Since 2008, surgical teams at Northeast Georgia Medical Center in Gainesville have performed more than 10,000 procedures on patients using da Vinci[®] robotic-assisted surgery systems.

The organization's service line approach to robotic-assisted surgery has been crucial to the program's success. A service line approach requires robust support across the organization, including executives in the C-suite and scrub techs in the OR. Communication and collaboration have supported the program's ultimate mission of achieving better outcomes and lowering costs while working to improve the patient and provider experiences.

"By taking a service line approach it has afforded us better communication and collaboration across stakeholders," said Courtney Emory, MSN, BA, RN, CNOR, Manager of Surgical Services at Northeast Georgia Medical Center. "Looking at our program this way supports efficiency and we're able to look at the data to validate our approach."

"Our culture has become one where our surgeons take the time to treat our team members as colleagues and we have worked together in partnership to continue improving our processes and ways that we work."

Blyss Splane

BSN, RN, CNOR, Robotics

Coordinator

Northeast Georgia Medical Center

The organization's targeted application helped facilitate constructive collaboration across the robotic-assisted surgery team, drive better performance across multiple performance indicators, and sustain support. The robotics care team discusses performance metrics each day. This data-driven collaboration has helped reduce variation in the OR in the form of tray standardization, instrument utilization, and the OR setup process. Standardization and reduced variation have supported OR optimization and cultivated continued collaboration while boosting staff morale.

One of the most significant achievements of NGMC's data-driven collaboration has been the more efficient use of the OR and robotic platforms, which has allowed for quicker turnover times between surgery and a more streamlined preparation process for support staff.

"We got a commitment from our surgeons once our care team staff committed to the reproducibility of quick turnovers and standardization regardless of procedure type," said Emory. "Now we have surgeon champions for each surgical service we support."

This high-performance, collaborative environment has cultivated a mutual respect among surgeons and the surgical support team. "Our culture has become one where our surgeons take the time to treat our team members as colleagues and we have worked together in partnership to continue improving our processes and ways that we work," said Blyss Splane, BSN, RN, CNOR, Robotics Coordinator, at Northeast Georgia Medical Center.

Administrators have capitalized on this camaraderie by creating specific OR turnover time goals and giving support teams the tools necessary to hit their targets. For example, all instruments are color coded for easy visibility, data is utilized to identify usage frequency for all instruments, and all surgical instruments are centrally located to support efficiency. The robotic-assisted service line steering committee also optimized block scheduling and case stacking. These efforts allow administrators to better predict staffing needs to help ensure no open cases were scheduled during the designated robotic block. This allowed surgeons "unfettered access" to robotics platforms, according to Emory.

"By implementing these standardizations into everything we do, we became more efficient, we achieved better operational outcomes and our service line grew," said Emory. "Our surgeons are able to complete more minimally invasive procedures and often times their patients are going home and not staying overnight ... this has really helped increase both surgeon and patient satisfaction. And because our care teams are able to predict what their day is going to look like, they're increasingly satisfied with their roles as well."

Intuitive's Genesis team helped support NGMC throughout its robotics journey. Genesis is a specialized consulting, training, and education program backed by 10 years of in-field experience, across 20 countries, and more than 2,000 hospitals globally. "Genesis helped us by identifying opportunities to improve productivity and standardization," Emory said.

In addition to helping enrich the OR environment for staff, the Genesis team also helped NGMC reduce OR staffing models, allowing the organization to do more with less.

OSU Wexner Medical Center

Implements a new robotic-assisted surgery staffing model.

22,000+

Procedures on patients using da Vinci robotic-assisted surgery systems.



Lessons from The Ohio State University Wexner Medical Center

"We determined that our scrub techs weren't operating at the top of their scope. There was room for an expanded role."

Paige Starkey

Surgical Technologist Manager
Wexner Medical Center

The Genesis team helped surgical teams at The Ohio State University Wexner Medical Center in Columbus achieve similar goals. In the intraoperative setting, the Genesis team and OSU administrators were able to reduce the surgical support team for select robotics cases from three full-time staff (one first assist, one scrub tech and one nurse) to two full-time staff (one scrub tech and one nurse circulator).

OSU's new robotic-assisted surgery staffing model required scrub techs to take on a more expanded role in the OR. Growth in the robotics program and higher rates of turnover across the organization spurred OSU administrators to make this change, according to Paige Starkey, a surgical technologist manager at Wexner Medical Center. The hospital's robotic surgery program has experienced steady growth since 1999, and Wexner Medical Center surgical teams have performed surgery on more than 22,000 patients using da Vinci robotic-assisted systems.

Surgeons spotted the opportunity for an expanded scrub tech role and drove the initiative. “Our surgeons really wanted to know what scrub techs could do in the OR to improve efficiency,” said Starkey. “We determined that our scrub techs weren’t operating at the top of their scope. There was room for an expanded role.”

This spurred robotic-assisted surgical leaders to assess surgical policies and best practices to better determine the precise number of team members required to support each specific procedure. Administrators then established a competency outline for surgical techs and the first assist to achieve greater clarity around the roles and responsibilities of each position. To determine when to assign first assists to a specific procedure, leaders assessed cases based on complexity, volume, the potential novelty of the procedure itself, and the experience of the surgeon.

OSU implemented this new approach in 2021 and is tracking performance to determine the benefits of these changes. “We’re tracking how many increased robotics cases we can have from these new efficiencies,” said Starkey. “We’re also assessing the financial impact — essentially we want to know where we’re saving money based upon these human resource changes.”

One immediate benefit of these shifts identified by program leaders is the added time surgical residents get to spend training on the robotic surgery console instead of covering support duties now handled by scrub techs.

These changes have been a major staff satisfier across members of the robotic surgery team. Scrub techs have embraced the opportunity, surgeons are operating with greater efficiency and residents are getting more time to train on robotic consoles.

“We’re tracking how many increased robotics cases we can have from these new efficiencies. We’re also assessing the financial impact — essentially we want to know where we’re saving money based upon these human resource changes”

Paige Starkey

Surgical Technologist Manager
Wexner Medical Center



Methodist Healthcare System

Establishes standardized patient care with data-driven protocols.



"We've focused on trying to supplement our inpatient workforce with LVNs in a way that enhances patient safety."

Allen Harrison

President and CEO
Methodist Healthcare System

Lessons from Methodist Healthcare System

Expanding the role of supporting care team members has also been helpful for San Antonio-based Methodist Healthcare System. Pandemic-related staffing challenges placed a significant personnel and financial burden on the organization. Registered nurses were increasingly faced with difficult challenges and having to fill vacancies with travel nurses can be very expensive. In response, the organization identified an opportunity to improve efficiency by expanding the role of licensed vocational nurses or LVNs, which is the terminology used in Texas and California. In other states, the term licensed practical nurses (LPNs) is used to refer to nurses licensed to provide basic care to nursing patients and work with clinicians with more advanced credentials.

"We've focused on trying to supplement our inpatient workforce with LVNs in a way that enhances patient safety," said Allen Harrison, the health system's president and CEO.

"Our nurses are grateful to see new, permanent members of the team. They're grateful to see somebody who's prepared to show up day after day. Doing the same job with the same people and providing some consistency and some predictability to our workforce. Our nurses really appreciate what we're trying to accomplish"

Allen Harrison

President and CEO

Methodist Healthcare System

Methodist's leadership identified postoperative care for robotic surgery patients as a place where the expanded role of LVNs could have a positive influence on care quality and operational efficiency. Before making this shift, administrators and data experts looked closely at length of stay, and complication and readmission rates, deciding to integrate LVNs into what had traditionally been an RN-dominate space. The effort has received widespread support from both RNs and LVNs.

"We're utilizing LVNs specifically in inpatient settings where patients who are coming out of the OR are, in many cases, fairly healthy surgical patients," said Harrison. "We've found this really works among patients who had robotic surgery or orthopedic surgery. This allows us to utilize the LVNs as part of a team concept with the RNs."

When integrating LVNs into the postoperative care environment, the robotic surgery team also took the opportunity to standardize care with data-driven protocols designed to improve consistency and create an environment of predictability. These changes subsequently eased administrative burden for clinicians and boosted staff morale. The process was iterative so as not to overburden LVNs.

"I think today's nurses are much more collaborative, and that has played out in our favor. Our nurses have been pretty enthusiastic about the changes we've made," said Harrison.

The strain of the pandemic has likely boosted support for this new staffing model. Nurses who have remained in their roles throughout the course of COVID-19 have watched many of their colleagues leave the profession. The LVNs, according to Harrison, have embraced these changes as good career opportunities and added a jolt of enthusiasm and consistency to the workplace.

"Our nurses are grateful to see new, permanent members of the team. They're grateful to see somebody who's prepared to show up day after day," said Harrison. "Doing the same job with the same people and providing some consistency and some predictability to our workforce. Our nurses really appreciate what we're trying to accomplish."

Empower people

In 2021, personnel shortages overtook financial challenges as the top concern of hospital CEOs, according to the American College of Healthcare Executives' annual survey.⁹ The workforce challenges facing healthcare are not going away. Health system leaders and administrators should look to leverage the tools they already have to support new strategies designed to enhance efficiency and support staff.

According to Harrison, "We are not going to be able to hire our way out of the nationwide nursing shortage, so we're going to have to be more innovative about how we staff our hospitals because there aren't enough RNs available to staff all of the facilities that are trying to hire more nurses."

Adoption of robotic-assisted procedures in general surgery has risen significantly¹⁰ in recent years. However, many organizations have yet to fully capitalize on the capacity of this technology to help advance the pursuit of the Quadruple Aim and empower their surgical teams. Amid rising competition, intensifying financial pressures, and staff turnover, hospital leaders could benefit from looking into these opportunities more deeply.

To learn more the da Vinci surgical platforms and the resources available to support a service line approach to robotic-assisted surgery, [click here](#).

References

1. Gue, D. A. (2019, October 15). The health IT staffing shortage is a problem morphing into a crisis. Healthcare IT News. Retrieved August 31, 2022, from <https://hitconsultant.net/2019/10/16/health-it-staffing-shortage-crisis/>
2. Malvin, G. (2021, October 4). Nearly 1 in 5 health care workers have quit their jobs during the pandemic. Morning Consult. Retrieved August 31, 2022, from <https://morningconsult.com/2021/10/04/health-care-workers-series-part-2-workforce/>
3. Sinsky, C. A., Brown, R. L., Stillman, M. J., & Linzer, M. (2021, December 5). Covid-related stress and work intentions in a sample of US Health Care Workers. Mayo Clinic proceedings. Innovations, quality & outcomes. Retrieved August 31, 2022, from <https://pubmed.ncbi.nlm.nih.gov/34901752/>
4. Data brief: Health care workforce challenges threaten hospitals' ability to care for patients: AHA. American Hospital Association. (2021, October). Retrieved August 31, 2022, from <https://www.aha.org/fact-sheets/2021-11-01-data-brief-health-care-workforce-challenges-threaten-hospitals-ability-care>
5. Fifer, J. J. (2022, May 31). Solving the nurse staffing crisis — We're all in this together. HFMA. Retrieved August 31, 2022, from <https://www.hfma.org/topics/hfm/2022/summer/solving-the-nurse-staffing-crisis--we-re-all-in-this-together-.html>
6. Pollack, R. (n.d.). Hospital workforce shortage crisis demands immediate action. American Hospital Association. Retrieved August 31, 2022, from <https://www.aha.org/lettercomment/2022-01-27-hospital-workforce-shortage-crisis-demands-immediate-action>
7. Jensik, L. (2021, November 12). Navigating Healthcare Staffing Challenges: 3 execs share their strategies. Becker's Hospital Review. Retrieved August 31, 2022, from <https://www.beckershospitalreview.com/hospital-management-administration/navigating-healthcare-staffing-challenges-3-execs-share-their-strategies.html>
8. NGMC Gainesville first in state to earn three new center of excellence designations. Northeast Georgia Health System. (2020, November 19). Retrieved August 31, 2022, from <https://www.nghs.com/2020/11/19/ngmc-gainesville-first-in-state-to-earn-three-new-center-of-excellence-designations>
9. Top issues confronting hospitals in 2021. American College of Healthcare Executives. (2022, February 4). Retrieved August 31, 2022, from <https://www.ache.org/learning-center/research/about-the-field/top-issues-confronting-hospitals/top-issues-confronting-hospitals-in-2021>
10. Sheetz, K. H., Clafin, J., & Dimick, J. B. (2020, January 3). Trends in the adoption of robotic surgery for common surgical procedures. JAMA network open. Retrieved August 31, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6991252/#:~:text=The%20use%20of%20robotic%20surgery%20increased%20from%201.8%25%20in%202012,Ci%2C%201.9%25%2D2.3%25>

Important safety information

For important safety information, please refer to intuitive.com/safety. For a product's intended use and/or indications for use, risks, full cautions and warnings, please refer to the associated User Manual(s).

Presented material disclosure

This material presented represents the views, experiences, and opinions of independent surgeons and healthcare professionals based on their experiences with the da Vinci surgical system. Their experience may or may not be reproducible and is not generalizable.

Da Vinci Xi/X system precaution statement

The demonstration of safety and effectiveness for the representative specific procedures did not include evaluation of outcomes related to the treatment of cancer (overall survival, disease-free survival, local recurrence) or treatment of the patient's underlying disease/condition. Device usage in all surgical procedures should be guided by the clinical judgment of an adequately trained surgeon.

© 2022 Intuitive Surgical Operations, Inc.
All rights reserved. Product and brand names/logos are trademarks or registered trademarks of Intuitive Surgical or their respective owner.
See intuitive.com/trademarks.