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# Leading the healthcare workforce with data science

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The proliferation of the electronic health record (EHR) has brought much more than connectivity and continuity to patient data sharing. It also has provided a platform for clinical executives and front-line nursing managers to measure and support healthcare's most valuable resource—the caregiver. To deliver the most effective and efficient patient care, healthcare systems must rethink their engagement models for clinical resources and staff.

For an industry at the onset of a new decade rife with volatility, there's no better time to take action and improve the alignment between patients and their caregivers. Healthcare professionals are experiencing myriad challenges, most critically a shortage of skilled clinical personnel. This, of course, impacts organizational sustainability and could threaten the core mission of community health and patient care. An opportunity to ensure quality is to embrace new and evolving technologies.

## Workforce management in the digital age

It's difficult to ignore the presence of advanced technology and how it is being used to support bedside caregivers. One of those technologies is workforce management (WFM). It is intended to automate former paper processes such as workload forecasting, scheduling, and time and attendance. A critical enterprise application, WFM is still thirsting for digital transformation to be able to enhance a modern, patient-centric environment.

So, what is a modern WFM system? It's an application that provides fresh insights into nurse skill levels, scheduled compliance, and patient acuity from which to match the right caregiver with the unique needs of each patient. Web-based and mobile, organizations are finding exceptional value when implementing a modern WFM system to manage the complexity of clinical staffing. Being digital, however, is much more than just automation.

The nursing function is diverse—much like patient diagnoses. Nursing includes unique skillsets, specialization, and certifications. There are also large data sets related to staff placement and clinical movements throughout the organization, each and every day, that aid in the accommodation of shifting patient requirements. So, it's prudent to use all available tools and systems, like WFM, to optimize clinical outcomes in light of this diverse viscosity.

WFM is a digital system that enables common data exchange amongst staffing, payroll, and human resources in order to facilitate interoperability for EHR and electronic medical records, human capital management, and enterprise resource planning. As a clearinghouse for nursing and patient data, WFM is aggregating clinical information to better determine care workloads, shift staffing, proactively address overtime and pay issues, and provide trusted and accessible insights to ensure regulatory compliance across the organization.

### **Digital solutions for schedule complexity**

It's one thing to be digital but a completely different matter to be practical. The most pressing frustration for clinical personnel typically involves scheduling imbalances, improper staffing levels, or unfair workload distribution. This all readily leads to nurse burnout, which is obviously bad for communities and individuals alike. It also negatively affects the bottom line, especially when contingent labor is utilized to fill open shifts at premium costs. A modern WFM system uses practical data to promote digital solutions in these areas.

WFM will often project scheduling requirements six weeks into the future. Of course, this is based on assumed patient census and budgets and those too are constantly changing. The benefit of a modern WFM system is the constant monitoring, in real time, of workload and staffing levels and cost. This reduces the complexity and stress associated with the delivery of care and enables managers to make rapid changes to fluctuating needs.

To further aid in efficiency, WFM also puts more control into the hands of nurses via mobile devices. Nurses can automatically receive text notifications regarding the constantly changing availability of shifts. It's often a significant source of increased satisfaction and engagement. Members of a modern workforce are always looking for more flexibility and balance in their work, and by systematically empowering them WFM is also improving patient care.

### **Finding the best talent, first**

In addition to creating efficiencies across processes and tasks post-hire, health systems should increasingly rely on data and scientific frameworks to find the right candidates for employment. The need for nursing skills and talent is outpacing the availability of those to fill the role. According to the American Association of Colleges of Nursing, nursing and other clinical shortages will be exacerbated by an aging population in the United States.

Hiring the right talent for the right job is crucial to creating a reliable clinical team and a culture of nurse engagement and retention. While in the past, HR professionals have relied on subjective criteria in the hiring process, pre-assessment science removes bias to determine whether the candidate is a fit for the organization, and in which roles they will be most successful. The three critical attributes that should be evaluated against top performers during the hiring process are behavioral, cognitive, and cultural alignment.

Utilizing adaptive technologies for efficient question and response, candidates are asked a series of questions that are designed to extract data about organizational fit. Hiring managers are then prompted with interview questions that help determine whether a candidate has both the professional and soft skills needed for the job. Would the nurse perform better in the ER, or in Obstetrics/Gynecology or another specialty? What are the applicant's administrative skills? Do they demonstrate potential leadership qualities?

## Evolving support for caregivers

Healthcare staffing always has been one of the industry's biggest and most expensive endeavors. Whether removing distractions from patient care or creating a culture of enhanced staff engagement, technology can support the human side of healthcare. Science and analytics enhance the hire-to-retain process, especially for nursing staff, and present an evolving opportunity to achieving the Triple Aim of improving care, health, and costs.



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