SECTION 2

DATA AND TECHNOLOGY TO SUPPORT THE WORKFORCE
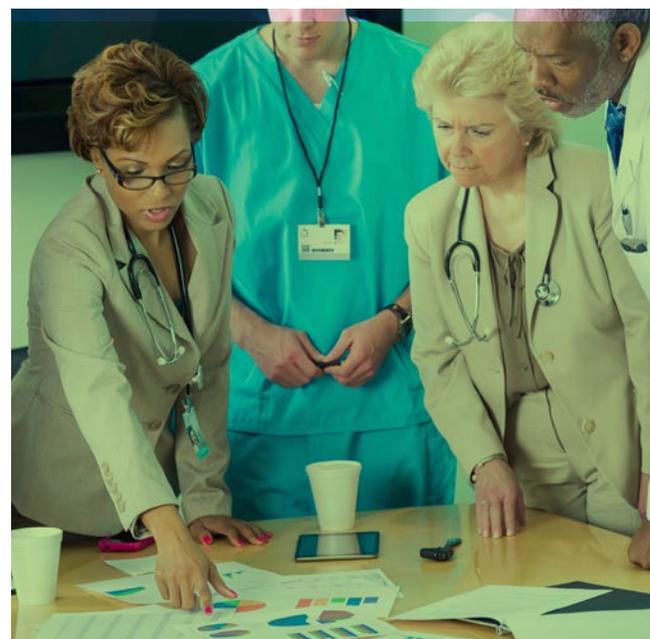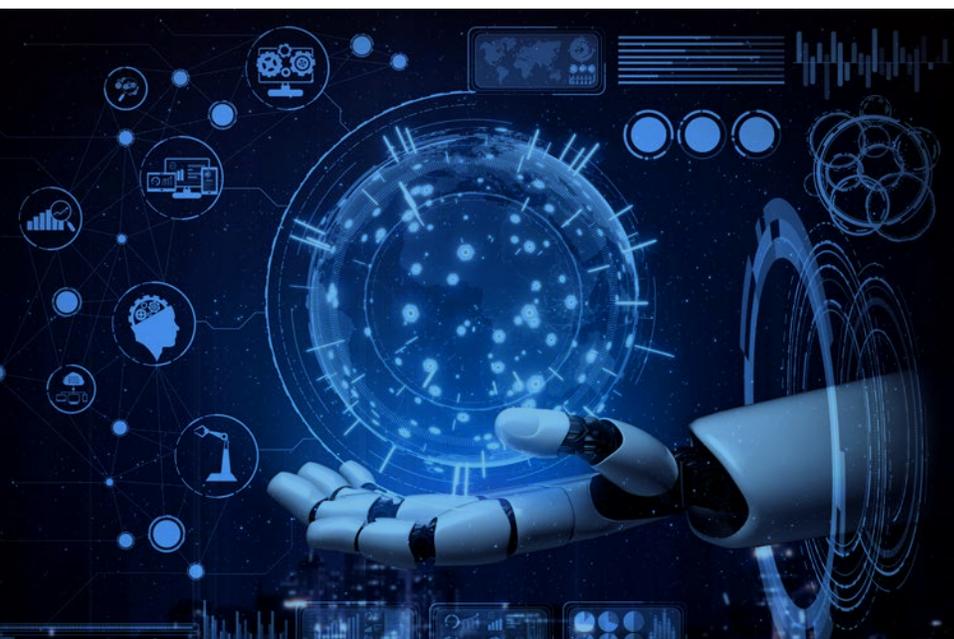
Data and Analytics

Data is not the first thing one thinks of when addressing workforce issues, but data can identify trends, measure engagement and inform decisions about where resources are needed, how your organization compares to others, and determine if you are making progress. As you engage with your internal data, it also is important to understand overall economic trends in your local community, region and nationally that could impact your workforce.

As discussed in Chapter 1, the issue of burnout is of particular importance in the health care field. It is critical for hospitals and health systems to address burnout from a system-wide level to better care for the health care workers who care for our communities. Have you performed an assessment of your own employees' sentiments? This data will help you identify your organization's specific problem areas and strengths. If you do not measure, you cannot address the issues that matter. The AHA will launch this fall a Voice of the Workforce survey, which you can use for your own organization(s); look for an announcement.

In addition to using data to assess the situation and support decisions for making change, it is extremely important to record data before and after implementation of any new workforce strategy. The identification and collection of key performance indicators (KPIs) will be critical to assess the effectiveness of your workforce strategies and will enable the team to determine the value and/or return on investment to inform future decisions.

Top Takeaways for CEOs

1. **Identify the workforce issues your organization is experiencing.** Once you have identified the issues, you can identify the data you need to collect and track to assess the magnitude of the problem and the direction of your progress.

2. **Appoint an accountable leader** within the executive team to lead a centralized, coordinated and ongoing data collection and reporting effort.

3. **Set aside resources,** including executive time and energy to implement this data strategy.

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Recent literature offers many interesting and helpful articles on recent health care workforce initiatives. Here are two good articles that address the financial and non-financial incentives health care employers are using. The **AHA Resource Center** can assist members with literature searches.

ARTICLES

5 incentives offered to recruit, retain healthcare workers, Becker's Hospital Review, November 10, 2021.

The 6 Most Successful Healthcare Recruitment and Retention Strategies, September 2021.

Considerations for hospital and health system leaders

Data is a team effort. No doubt there are pockets of critical information across the organization that, when compiled, will provide important insights. From your organization's internal human resources records you can look at:

- Data on employee retention rates and recent departures. Consider stratifying by title, age, tenure, etc.

- Data on days to fill certain positions, coupled with data from the field will help focus your recruitment and retention efforts.

- Also consider identifying internal process efficiency metrics, particularly in a competitive environment. For example, measuring time an application is received, to the time it gets to the hiring manager, to time to interview, to time to job offer can all provide insights into process improvements.

- Trends in sick days and call-outs to identify potential problem areas. Similarly, look for instances where vacation time is not being taken — this could be an indication of potential burnout.

- Changes in span of control for your leaders and managers; are they taking on more or less responsibility and is this acceptable?

Additional internal data resources are your average daily patient census, quality measures and financial records to assess and refine your staffing estimates and opportunities. If you do not have recent survey data from your employees, seek out anecdotal data from your management teams. Utilize the information you have collected on the well-being of your clinical and professional teams to pinpoint high-stress service areas. Identify the non-financial motivators for job satisfaction in your organization — which may vary by service area.

Once you have a clear understanding of your workforce measures and what you think you need to solve, look for data on trends external to your organization, both in the health care workforce, but also in the community regarding health needs, birth rates, disease prevalence, housing status, etc.

The data you compile will inform and support your workforce strategy and comprise your KPIs. Remember you won't know how effective you are unless you measure progress. Establish your KPIs based on what you expect to achieve, but don't collect data that you will not need, that creates work for the team and discourages continuation of effort (if the data are collected and not used).

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Assessment

- Determine what you want to measure in order to assess the current landscape and identify your organization's needs. Base your determination on what you think you know but need to prove.

- Assess commitment and resources available at the executive level and assign an executive team lead to manage the ongoing work with accountability back to the leadership team.

- Inventory your internal data assets. Identify additional data needs, based upon your organization's actual or perceived issues, then ascertain how they can be met. Identify external data sources for understanding the current state of the workforce and needs for the community. Questions to ask of this data include:

  - What are the trends by age group, race and ethnicity, salary range, education level and tenure?

  - How do the overall trends compare to what is happening in my organization?

  - Which employees or groups of employees are most at risk for resigning/retiring?

- One important source of data is current position postings. This data will help you assess the demand for the same positions you need to fill. When there is significant demand, employers will need to differentiate themselves in order to attract top candidates. Salary and benefits are always most important, but other, non-financial benefits are playing an increasingly important role in attracting and retaining the best employees.

- Develop a summary/dashboard of critical workforce metrics and assign responsibility for updates and revisions to one, central resource. The dashboard should be user-friendly so it can be shared at the executive and board levels and presented at every workforce strategy meeting.

- Set some benchmarks or goals for acceptable levels of turnover, sick time, vacation use, etc.

- Set KPIs for evaluating workforce initiatives. If you want to be able to compare your organization to others, you will need to use standardized metrics that will be comparable to those in the field. However, if you are only concerned with measuring progress against the organization's own history, you have more freedom to create a customized metric that meets your specific business need.

- Establish a forum for collecting employee feedback about non-financial motivators on a regular basis.

DATA

Bureau of Labor Statistics (BLS) data on national trends and benchmarks:

- **BLS Occupational Employment Statistics, Occupational Profiles: 29-0000 - Healthcare Practitioners and Technical Occupations** and **31-0000 - Healthcare Support Occupations**

- **BLS Monthly Labor Review**

- **BLS Job Openings and Labor Turnover Survey**

- **BLS Employer Costs for Employee Compensation (report builder)**

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Initiation and Growth

- Using data effectively does not happen overnight. It is important to think about the data you need versus the data you have. If you start with the latter, you may never obtain the information you really seek. Make sure your data collection/reporting supports your workforce strategy and KPIs.

- Develop a set of hypotheses first; determine what data you need to prove or disprove them; then work with the interdisciplinary teams to pull and compile the right metrics.

- Assign responsibility for your workforce data program to one, central source to ensure consistency.

- Make sure that all data collected from internal and external resources are properly sourced and cited. Maintain as much documentation as possible.

- Assign a data steward to establish and maintain definitions, life cycle and quality standards; and a data custodian to be responsible for updates and revisions. Include this information in your data governance program.

    DATA GOVERNANCE RESOURCES

    Nebraska Hospital Association's Data Governance Guide

    Informatica

    Health Catalyst

Leadership

- It is important that executive/senior leadership is engaged and supportive of the use of data for decision-making and invested in the workforce strategy you develop using that data. Without support from the top, you cannot ensure that your data findings will lead to appropriate action and follow-up.

- Commit resources (people, time and finances) to the collection, curation, reporting and review of data and KPIs. Leadership needs to engage with the data and understand its significance.

    AHA RESOURCE

    AHA's Market Scan 4 Ways on Becoming a Data Driven Organization provides information on assessing an organization's data maturity and links to additional resources.

Sustainability

- Employment trends and staffing needs ebb and flow. The data program you establish should be robust enough to evaluate changes in the market as well as changes in your workforce over time.

- Continued measurement and review of workforce data will provide early warnings of inflection points and help to measure the impacts of specific recruitment and retention efforts.

- Tracking of community needs will help you anticipate where service line additions or enhancements might be needed.

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- As you compile your workforce data over time, keep track of the surges in COVID-19, as well as other external influences like flu season, economic ups and downs, incidents of violence in the community or in the hospital, etc. The more information you collect on how your workforce reacts to these external factors the better equipped you will be to use predictive analytics to address changing conditions.

RESOURCES

Resources on national trends that may affect the health care labor market:

- **PolicyMap** is a publicly available tool that compiles geographic data on over 50,000 indicators encompassing demographics, income and spending, housing, quality of life, economy, education and health.

- The U.S. Census Bureau conducts **annual inter-census surveys**.

- The Centers for Disease Control and its **National Center for Health Statistics** collect and report data on disease prevalence and vital statistics.

AHA Partnerships:

- Prolucent Health provides technology and services to fill health care workforce vacancies, with a focus on lowering overall costs. Prolucent collects data from across the country, using their proprietary web-scraping algorithms, to keep track of trends in vacancies and time-to-fill positions. The AHA partners with Prolucent to provide **quarterly regional reports** to the field and access to Prolucent's Liquid Compass online tool.

- Syntellis is the former data collection arm of Kaufman Hall. Now an independent company, Syntellis collects monthly data from over 1,000 hospitals nationwide and provides benchmarks for financial, labor, and utilization comparisons in near real time. The AHA partners with Syntellis to provide **quarterly financial updates** to the field.

- Kaufman Hall produces quarterly reports on financial trends in hospitals and health systems. The AHA partners with Kaufman Hall on special issue trend reports and webinars for the membership.

AHA Resources at a glance:

- **Workforce Issues Remain at the Forefront of Pandemic-related Challenges for Hospitals**
- **AHA Talent Scan 2022**

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Technological Supports

Hospitals and health systems across the country have invested in technologies to support population health management, clinical integration, convenience and access for patients. Technology also can play a critical role in supporting the health care workforce. There is a broad range of technologies that can be utilized to support the workforce, including machine learning, artificial intelligence and marketplace platforms.

These technologies are not intended to replace staff, but rather to enhance the ability to do work, retain people and reduce burden, particularly in light of staffing shortages. For example, artificial intelligence is used to help employees and clinicians do their jobs more efficiently, eliminate burdensome tasks and improve work-life balance.

Hospitals and health systems can focus on technology to enhance the workforce experience in five areas:

1. Support individuals and teams through digital wellness solutions, leadership training and guidance for managers on building and engaging diverse teams. Use digital means to offer easy access and greater spread.

2. Alleviate burden by using tools that can help with administration, revenue cycle or other routine tasks. This can include intelligent automation through robots and artificial intelligence.

3. Enhance flexibility with agile scheduling solutions, predicting demand, or creating enterprise staffing solutions or labor pools.

Top Takeaways for CEOs

1 **Embrace technology** as a way to support your health care workforce.

2 **Change-management strategies** will be critical to address the cultural shifts associated with this technology.

3 **Partnership** can help support your organization's ability to implement solutions in the most effective and efficient way.

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4. Reduce friction by digitizing human resources functions, streamlining routine interactions and smoothing processes like credentialing.

5. Optimize care delivery by using artificial intelligence, predictive analytics and virtual health options that allow more flexibility and remote staffing, greater team-based coordination, clinical just-in-time training and improving the user friendliness of electronic health records.

Considerations for hospital and health system leaders

As you work to identify the best approaches to using technology to support your workforce, it is important to remember that technology will be only one piece of a successful workforce transformation. Understanding the current workload and workflows and the appropriate team composition must be determined before technology solutions are investigated.

In addition, there will be no one-size fits all solution for hospitals and health systems across the country. Solutions will be local and must take into consideration the needs and resources available at your hospital or health system.

Similar to the work discussed in previous chapters, evaluating technology to support the workforce requires leadership and organizational commitment, policy and process adaptation and new ways of doing business.
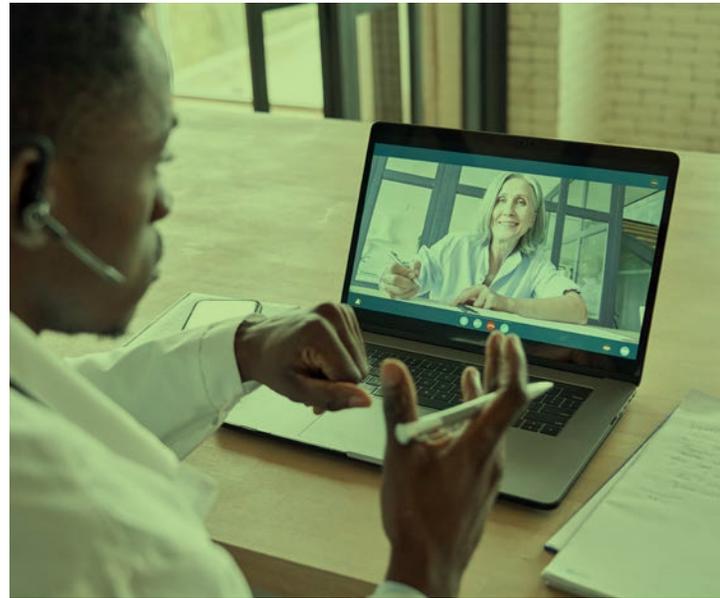
Assessment

- Inventory current technologies, identify current usage trends and the potential for the technology to reduce burden, remove barriers to care or address workflow friction. In addition, it may be beneficial to analyze the cost of these technologies and any long-term cost savings that are anticipated from their implementation. When rolling out new or improved technologies consider staged changes to reduce burden on the workforce.

- When assessing how technology can enhance your workforce, it is important to start by evaluating the work that is currently being done by your workforce and identifying which tasks or functions could be replaced or improved with technology and the benefits that could accrue from those changes. This evaluation can be done for a project, team, unit or the organization as a whole.

- It also is important to understand the models of care that are currently being utilized and assess whether new models of care delivery — for example, utilizing teams in different ways — could be implemented to further support your workforce. As new or different technologies are considered, ensure input from the full team.

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- Once those assessments are complete, you can begin to define goals, identify the changes that must be made, and select the technology necessary to support those goals. It is important to remember while setting goals that technology should be used to decrease, not add, burden on the workforce.

WEBINAR

Leveraging Technology to Bring Your Workforce into the 21st Century

Initiation and Growth

- As discussed above, there are many ways that technology can be implemented to help support your workforce.

CASE STUDIES

Sutter Health Artificial Intelligence Platform Improves Inpatient Pharmacy Operations

Atrium Health Integrates Behavioral Health into Primary Care

Spectrum Health Telehealth Program

Artificial Intelligence Automating Processes for Professionals

- Implementing each of these technologies will require a culture shift and it will be important to have a change-management strategy to handle implications of transitioning to new technologies.

- Develop a plan to engage key stakeholders, including front-line and core managers in evaluating technologies and providing input. Those on the front lines likely have the best view of where changes can most help.

WEBINARS

Technology Trends: Driving Operational Efficiency in Healthcare

Reliability Centered Maintenance: Getting Started with Technology

The Future of Virtual Care: Solving Provider Frustrations and Patient Expectations

Leadership

- Integration of new technologies will require support from senior management, specifically as it relates to the policy and process changes that will be needed to ensure that technology will be successful. It may be helpful to identify those leaders that are ready to take on this work, and leverage those innovative leaders as champions within your organization to guide this work.

REPORT

AI and the Health Care Workforce - 18 Questions for Leadership Teams

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Sustainability

- Sustainability will depend on addressing the many barriers that exist when implementing technology. This includes cultural, technical and data management barriers that may slow down adoption and implementation of technology. It will be important to identify these barriers and create the pathways necessary to address them as technology is implemented.

  REPORT

  AI and the Health Care Workforce

Partnerships

Implementing technology to support the health care workforce is an effort that requires partnership with digital solution providers. The process of evaluating what solutions are available and which providers may be the right partners can be challenging.

AHA has partnered with AVIA, the nation's leading digital transformation partner for health care organizations, to bring new solutions and tools to support AHA members on their digital journey. Through AVIA Connect, hospitals and health systems gain access to a curated databased of solution providers with which their peers have chosen to work. They also get timely content through an AHA online community and the opportunity to join discussion groups with their peers at other hospitals and health systems across the country.

RESOURCE

AVIA Connect Guide

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