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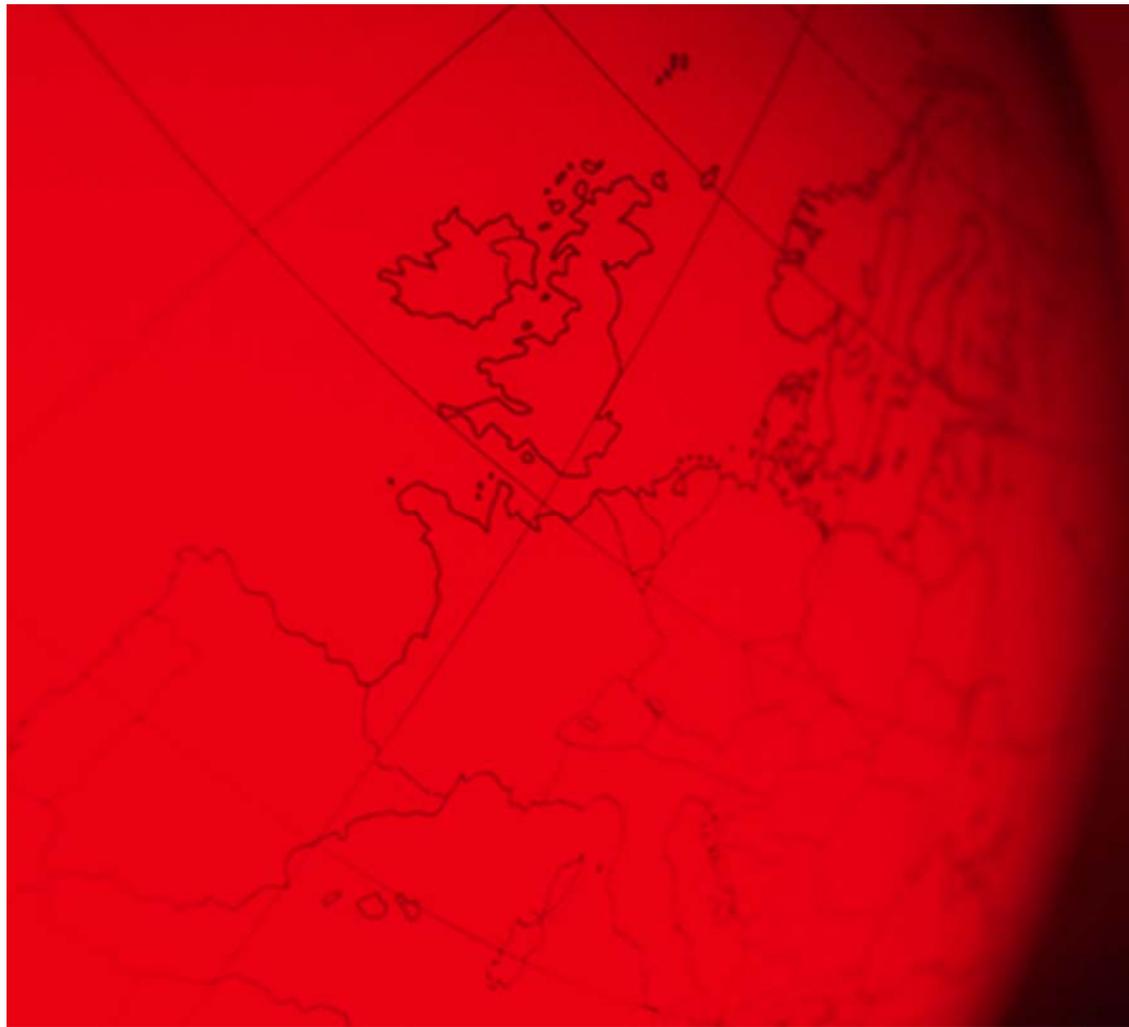
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# **GUIDEBOOK**

## KRONOS WORKFORCE ANALYTICS FOR HEALTHCARE



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**TOPICS**Business Intelligence &  
AnalyticsEmployee Management  
Applications**THE BOTTOM LINE**

**Kronos Workforce Analytics for Healthcare enables health care staffing managers to rapidly identify factors that impact payroll and take steps to improve them. Benefits of the application include greater visibility, increased productivity, managed labor costs, and improved patient care.**

Kronos Workforce Analytics for Healthcare enables managers to monitor labor-related data to identify opportunities to manage or reduce payroll costs such as overtime, contract labor usage, and overstaffing. Components of the application include:

- Web-based dashboards with color-coded indicators help managers to assess where their employees stand in terms of key payroll factors such as absence, scheduling, productivity, and overtime.
- Support for key performance indicators help to guide managers toward specific targets for their type of organization and track progress toward those goals.
- Prepackaged data analysis reports enable managers to quickly drill down to the root of a potential problem and identify the actions needed to solve it.
- Ongoing aggregation of data from multiple systems and sources provides an up-to-date assessment of workforce performance, so managers can compare performance across multiple departments and operations.
- Historical views of performance data enable managers to determine averages and poor performers, set targets, and evaluate how their strategies improve efficiencies over time.

**THE CHALLENGE**

Health care is essentially a labor-intensive manufacturing process. When a manufacturing process's largest line-item input is labor, managers must adjust and manage that input carefully to ensure they can meet demand while minimizing costs. In fact, in health care the biggest and most costly risk managers face is mismatching labor to demand, because day-to-day staffing requirements can vary considerably by both volume and skill set. Visibility into labor data is necessary for both long-term strategic planning and short-term cost management tactics.

Analytics can provide both the reporting and visibility for long-term planning and the dashboards and alerts for day-to-day operational management. This Guidebook explores the experiences of customers using the Kronos analytics solution and its impact on business performance in areas such as labor productivity and labor costs. It also provides guidance on how to make a baseline assessment of deployment KPIs so customers can understand and track the impact of their own analytics project.

**BENEFIT AREAS**

Nucleus analyzed Kronos customers and found the analytics solution delivers a number of benefits. Most commonly expressed benefits included increased visibility for decision making, improved labor productivity, managed labor costs, and improved patient care.

### Increased visibility for decision making

Without labor analytics, managers often spend several hours a week tracking departmental performance and productivity through manual and paper-based reports, spreadsheets, and time and attendance systems. This process is time consuming and error prone. Perhaps more importantly, the time lag between when an activity occurs and when a manager is aware of it makes it difficult for managers to be proactive. For example, by the time a manager knows an employee is working overtime, the overtime hours have already been logged, so it is too late to reschedule workers to avoid overtime.

Unlike backward-looking reporting, interactive dashboards enable managers to understand what's happening in their labor pool when they can still impact it and make better projections of what will happen in the future. Users of the Kronos analytics solution found this greater visibility not only made them more productive; it also enabled them to more clearly explain and justify their changes to employees and upper management:

- *"It helps managers anticipate fluctuations up and better adjust those staffing grids so they can actually hit targets."*
- *"Before, reports would come out four to six weeks after close of cycle so there was no way to understand where you were."*
- *"Instead of being casual about adding another nurse or another technician, the staff knows why we're doing it — they have to truly think about how it's going to impact their numbers."*
- *"Managers can link out to it through self service and see how they're doing. You know if you're using too many expensive people and can have real-time looks at overtime."*

Improved visibility for decision making ultimately results in being able to better schedule different labor resources based on need, and either increasing general productivity, reducing variable labor spending (such as overtime or contract labor), or both. It also impacts managers' productivity, as they can spend less time gathering, verifying, and reviewing information.

### Improved labor productivity

The Kronos analytics solution can increase labor productivity by enabling managers to easily track and monitor fluctuations in both labor supply and patient demand to ensure optimized scheduling. For many customers, on a tactical basis this means the ability to receive alerts before they reach certain budget thresholds, the ability to view data in a usable form so they can compare their expenditures to those of peers, and the ability to forecast work volumes and skill sets needed to optimize future schedules. When discussing actual savings, Kronos customers found:

- *"We basically saved 2.3 percent of productivity by being able to better monitor and stay within budgets and targets."*
- *"We measure FTEs per adjusted average daily census. If I know of two comparable hospitals we can see who's doing better. It can range from three to five productive FTEs per adjusted occupied bed."*

### Managed labor costs

Many health care organizations rely on a combination of agency, contractor, overtime, or additional hires to cover staffing needs – all of which add to the payroll budget. With Kronos, users can review overall labor cost trends and then drill down into specific elements to make more informed labor budgeting decisions. In many cases, analytics enable administrators to identify where unnecessary agency or overtime labor is being used because of poor planning and correct the problem to reduce overall labor costs.

### Reduced agency and contractor labor

Managers can leverage the Kronos analytics solution to understand and limit the use of contract, agency, and other non-payroll professionals that can make up a significant portion of overall labor costs. Nursing and imaging, for example, are departments that are particularly exposed to sudden or extreme fluctuations in demand, and thus are often significant users of supplemental labor.

Because agency labor can be significantly more expensive than full-time employees, the ability to make even small reductions in agency labor can have a significant impact on overall labor costs. Companies seeking to rapidly reduce labor costs can use Kronos to identify opportunities to reduce agency labor. As one user said, *"We've already gotten agency down to minimal — 70 percent down. Now we're focused on hitting productivity standards."*

A number of organizations noted that, without Kronos, they were unaware that they are using high levels of agency or contract labor until they could correlate staffing invoices with internal data — when it was too late to make the necessary adjustments. With access to regular reports, managers found they could identify the most cost-effective way to cover staffing shortages and either begin recruiting or reconfiguring schedules to reduce contract labor.

### Reduced overtime

Organizations can also use the solution to reduce overtime by tracking trends on a daily basis instead of weekly or monthly and using automated alerts when employees are about to reach overtime to eliminate one-off occurrences. Kronos customers found that the ability to see which labor expenses are controllable in the short term, such as overtime, enables them to take the necessary steps before expenses are incurred:

- *"You know if you're using too many expensive people and can have real-time views of overtime. We definitely see the impact of that insight into better scheduling."*
- *"There has been a reduction in overtime. I'd attribute about a 3 percent reduction to analytics."*
- *"Managers can see quickly who might be approaching overtime. It's definitely made us aware of how much overtime we're using."*

Given that overtime costs can be 1.5 times the cost of regular payroll, and unplanned or forced overtime can have a negative impact on employee morale and absenteeism, being able to plan for and communicate about it effectively can have other positive impacts. Understanding overtime and communicating that

knowledge to staff can reduce the cost of unintended overtime — for example, when nurses trade shifts on an ad-hoc basis.

### Reduced employee turnover costs

When managers understand employee productivity and can rapidly address issues such as absenteeism and tardiness, as well as communicate clearly to employees about the rationale behind staffing decisions, it can increase employee satisfaction and reduce turnover.

The cost of employee turnover can be hidden in a large organization, but can be significant — especially in the case of health care, where specialty positions or qualifications may be in high demand. The costs of employee turnover include advertising costs and commissions paid to recruiters, costs of additional training for new employees without the requisite competencies, relocation costs, and the cost of overtime or contract labor to cover staffing needs until a position is filled. Other less visible productivity costs include the time required to onboard a new employee and bring him or her to full productivity.

The Kronos analytics solution was able to support reductions in employee turnover in a number of ways. For example, minimizing forced and unplanned overtime can reduce worker stress. Users noted that communication of staff management strategies based on data in the system can reduce perceptions of favoritism or inefficient labor management. Kronos customers found:

- *“In time of prolonged volume decreases, we know in a more timely manner so we don’t have to hire people and then lay them off.”*
- *“It makes managers more aware of how important it is to have the right people in the job so they’re not constantly retraining and replacing and they don’t continually have that high number of employees with a bedside orientation.”*

On a more indirect basis, better labor management can enable managers to focus less on scheduling and more on rewarding the most effective employees and on better employee development and retention.

### Improved patient care

The most indirect benefit associated with improving labor management in health care organizations — but arguably the most important one — is improved patient care. Kronos customers in health care often cite improved patient care as a key motivation for investing in analytics — and find that when managers have a clear and justifiable reason for making staffing changes they can argue for more effective labor management based on patient care even if it incurs additional costs. Without clear and current labor reporting, the case for a budget increase is difficult if not impossible.

## IDENTIFYING DEPLOYMENT KPIS

Managers considering adopting the Kronos analytics solution should initially measure and calculate a baseline of key performance indicators (KPIs) before the deployment. Estimating current KPI performance prior to the deployment and estimating their expected and worst-case values six to 12 months after the go-live date can establish the framework for a business case for adoption. This approach also allows the deployment team and stakeholders to agree on milestones to guide

the project and criteria for success. KPIs project teams should measure when deploying Kronos Workforce Analytics for Healthcare include:

- Increased manager productivity. Using direct observation or interviews, estimate the amount of time managers spend on gathering, analyzing, and validating labor-related data for decision making. After the deployment, survey managers again to determine how many fewer hours they spend per week on labor decision making. Keep in mind the total time saved will not necessarily translate into additional time worked by these managers because of the inefficient transfer of time. A reasonable correction factor of 50 to 75 percent should be used to translate time saved from additional time worked.
- Improved labor productivity. Measuring full-time equivalents (FTEs) per adjusted average daily census (AADC) is a common approach for evaluating labor productivity. Taking a snapshot in time or an average of FTEs per AADC for a time period before the deployment and after can help to highlight both departmental and organizational changes in overall labor productivity.
- Reduced overtime. Overtime statistics tend to be readily available. Before the deployment, determine your annual overtime expense as a percentage of total payroll and use this percentage to normalize for any change in size of the organization. After the deployment, calculate the amount of overtime as a percentage of total payroll again to determine how much overtime was eliminated as a result of the deployment.

## CONCLUSION

Labor makes up a significant portion of health care costs. As cost management is an important topic for all health care organizations, managing this expensive resource is important to long-term success and profitability of health care organizations. Organizations must be able to:

- Account for and justify their costs
- Show they meet compliance requirements
- Provide credible evidence they meet or exceed care quality standards.

Nucleus found that companies deploying Kronos Workforce Analytics for Healthcare can use the solution to help them meet these three objectives and increase departmental accountability and productivity. On an ongoing basis, Nucleus has found better labor reporting enables managers to spend less time on tactical issues such as scheduling and more time on strategic issues such as the quality of patient care.