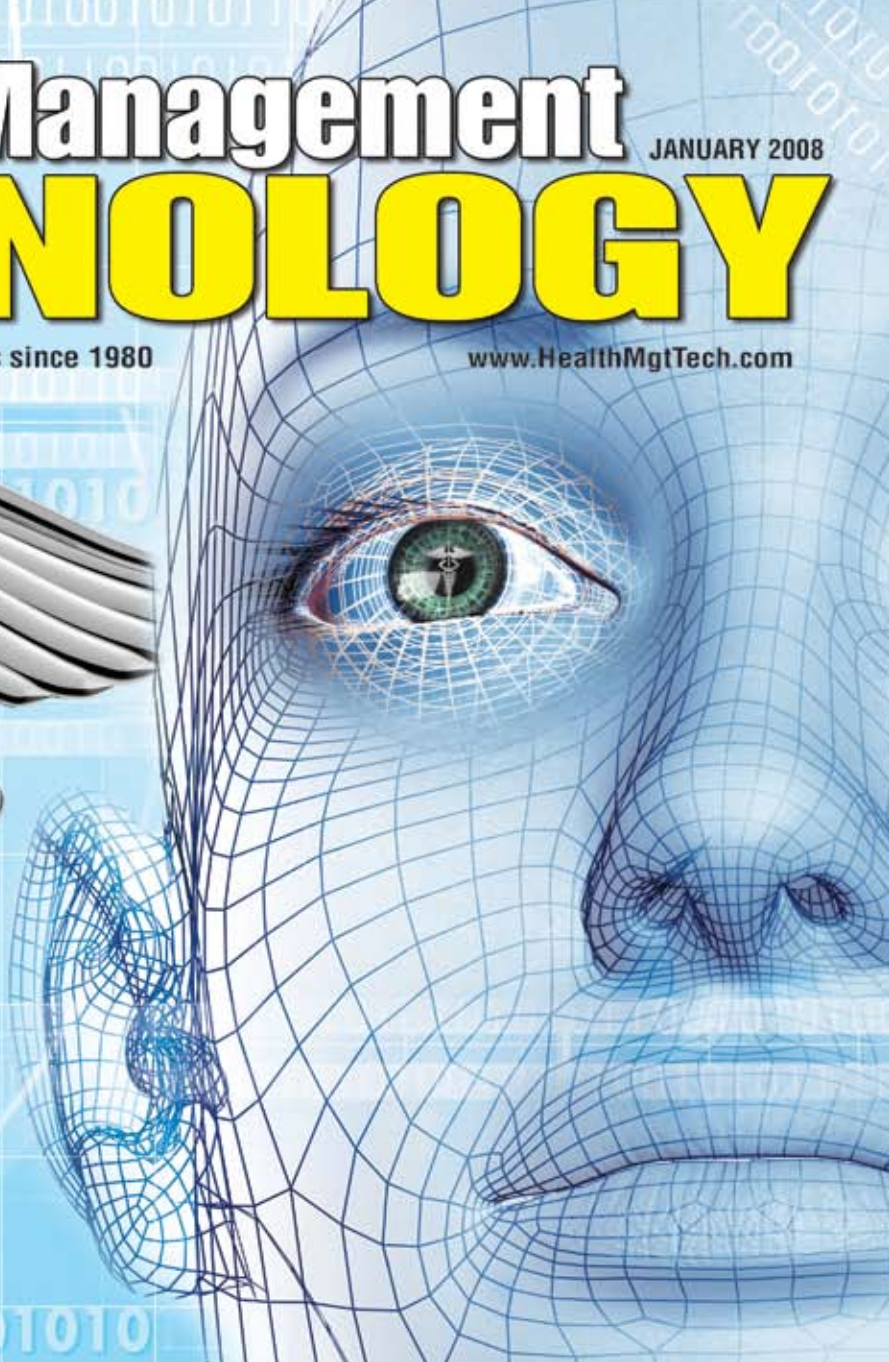


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# Superior Scheduling



A Midwestern provider adopts automated scheduling to enhance efficiency while ensuring appropriate staffing for effective healthcare.

By Terry Siek, RN, MSN

**L**ike many healthcare organizations, Hays Medical Center found itself battling the one-two punch of an ever-tightening labor market, compounded by a relentless escalation in labor costs. Leadership at the 194-bed facility recognized how vital it was to make optimal use of human resources and to schedule staff in an efficient manner that nevertheless ensured the most effective patient care possible. In addition, Hays was committed to providing managers with easy-to-use scheduling tools so they could assign staff appropriately, according to varying census and acuity levels—while freeing them from excessive administrative burdens.

To accomplish these objectives, Hays implemented an automated staff scheduling solution, which is tightly integrated with a companion time and attendance package, as well as its clinical acuity system. As a result, Hays has been able to streamline scheduling processes, better control overtime costs and ensure that each shift is staffed with the caregivers best suited for the current patient population.

### Time to Make a Shift

We had used an automated time and attendance system at Hays Medical Center for many years, and it had done a fine job of meeting our needs. The vendor providing the technology, however, announced an expensive upgrade in 2005. The price tag for the enhancements proved equal to the cost of a new system. We seized this opportunity to evaluate our options and initiate a search for new technology to assist us in managing our labor resources more efficiently.

We quickly realized that it would make sense to adopt time and attendance software that was integrated with a staff scheduling solution. Technology that “married” the two would allow leadership to access information previously unavailable—like productivity and overtime-trending reports.

**Shortly after implementation, the solution allowed me to make significant improvements in staff mix, particularly on the medical-surgical unit.**

Up until this point, scheduling had been done manually and we recognized that getting rid of paper processes would free significant amounts of managerial time and support efforts to better control labor costs. When creating schedules, managers would automatically be alerted if certain nurses were approaching an overtime situation, for instance, and other qualified personnel could be assigned to remaining shifts. Automation would likewise ensure that our staffing policies would be enforced consistently throughout the organization. In short, we felt that if we had to make a technology change, we wanted to make one for the better.

### Deciding On a New Direction

Hays began its search by looking at nearly every time and attendance package on the market. Comparison criteria centered on each system’s ability to integrate with staff scheduling, the cost and ease of use. At the same



time, we were looking for an acuity system for the Medical Center, and gathered information about how easily the software would interface with that technology.

We narrowed the list to three vendors and asked them to come on-site to demonstrate their products. We ultimately selected ActiveStaffer and Payrollmation from API Software Inc. because the time and attendance and staff scheduling components were packaged together, so there would be no need to build interfaces. It also rose to the top because it offered a self-scheduling module. Finally, the solution actually performed as promised during the demonstration, and could be used to schedule clinical staff like Support Services in addition to Nursing.

### The Implementation, Transition

After selecting the technology, we spent some time applying our scheduling rules and parameters to the solution. We then implemented it simultaneously across the enterprise. A core team of about 10 managers trained their peers, devoting about an hour each to the time and attendance and staff scheduling applications. Those who ultimately adopted the self-scheduling functionality participated in an additional hour-long session.

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When we retrospectively looked at our training approach, we realized that the different presentation styles of the individual trainers resulted in information about the solutions not being uniformly communicated to all units. We have since begun recording the most effective sessions and use these for ongoing training. Additionally, training sessions were open to any manager, regardless of their unit’s scheduling approach (e.g., block, variable). This became confusing because some information applied to one scheduling methodology, but not to others. We have since segregated training sessions by scheduling method to enhance learning.

Managers who were comfortable with technology had few problems with the transition and found the solution easy to use once they gained familiarity with it. A number of managers resisted the new approach and actually kept dual processes for a period of time. They would write up their schedule manually, and then key it into the solution. This continued for about six months until, one-by-one, each realized how much time they would save by creating

the schedules electronically. Colleagues would tell these managers that they were working too hard and urge them to “let the system do the work for you.”

### The Benefits of Actionable Information

Although we have yet to conduct quantitative studies, we are convinced that nursing managers have saved a substantial amount of time by using automated staff scheduling. Likewise, we are saving money because the solution helps us use our staff more wisely. Automation allows managers to efficiently create a schedule that is consistent with the customized rules and parameters that we have applied to the software, and which considers shift preferences of individual nurses. The solution alerts managers to potential problems like overtime situations or holes in the schedule, which can then be corrected.

We maximize our benefits because of the integration with the acuity system, which Hays launched earlier this year. We were able to create a specific template within the scheduling solution that considers acuity data. In the past, Hays had used a static grid that provided information based only on census. The acuity system additionally assesses the severity of patient conditions from information contained in our electronic medical record software. This information is forwarded to the scheduling solution and impacts the number of nurses assigned to specific units or shifts.

This enhanced functionality provides real-time benefits. Department managers can evaluate staffing requirements for the next shift based on census and acuity, and then see who is scheduled. If preset parameters indicate that five RNs are required but six have been scheduled, the manager can decide whom to send home. The integrated solution lets the manager check which of the six may be nearing an overtime situation or who might be receiving premium pay. If appropriate, they can call off these highly paid staff members and retain other nurses to ensure the wisest use of resources.

Conversely, if only five nurses are scheduled and six are needed, managers can determine whom to call in. The solution takes into consideration important factors like credentials that might be required for the current census and staff members’ work schedule preferences, and automatically pulls up staff member phone numbers for added convenience. Healthcare organizations can utilize special features for additional information as well. For instance, facilities can identify which nurses speak a language other than English or, in northern states, they can query which nurses have access to four-wheel-drive vehicles during heavy snows.

A number of units used paper-based self-scheduling in the past, but find that an automated approach is much more convenient. It has improved morale and job satisfac-

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tion by granting staff greater control over the schedules. They can view the schedule (either at work or remotely with secure Internet access), request specific shifts or ask for time off. Our human resources department tells us that a growing number of job applicants and new-to-practice nurses ask about self-scheduling, which leads us to believe this functionality helps with recruitment and retention efforts.

### The Human Factor

We have encountered one challenge with self-scheduling. When we were paper-based, nurses could readily see if particular shifts had been left unfilled and proactively signed up for them. After switching to automated self-scheduling, we've noticed that nurses sometimes consider only their own preferences, neglecting to review the overall schedule and therefore overlooking "holes" in the schedule. We've revised the rules governing self-scheduling to compensate for this (i.e., requiring alternating weekend shifts) and are educating nurses so they consider the entire unit's needs when utilizing the self-scheduling function.

Department managers can evaluate staffing requirements for the next shift based on census and acuity, and then see who is scheduled.

Finally, as CNO, I have found the solution to be particularly valuable. The reporting and analysis functionality helps me keep an eye on productivity and overtime. As an example, I now have data in hand to take to nursing managers to find out if the overtime hours are justified.

Shortly after implementation, the solution allowed me to make significant improvements in staff mix, particularly on the medical-surgical unit. I ran a report that showed a high patient-to-RN ratio, which meant nurses were providing too much primary care. We revised the scheduling parameters so that we use more certified nursing assistants. This approach maintains the same quality of care, but represents a better use of staff resources.

I also appreciate the fact that I can access staffing information in real-time and in one place. Before I do rounds, for instance, I can do a quick check on staffing levels in every department, thereby eliminating any surprises. I have a heads-up on possible problems and can provide solutions. Or, if someone complains that they are short-staffed that day, I can point out that the appropriate number of nurses were scheduled relative to the patient population.

In short, Hays has benefited greatly from our use of an automated staff scheduling solution—particularly because it is integrated with time and attendance, and

acuity. It has allowed us to streamline work processes, thereby enhancing productivity throughout the enterprise. Plus, we are confident we are using our staff more effectively, while maintaining a superior level of care for our patients.



*Terry Siek is chief nursing officer for Hays Medical Center in Hays, Kan. Contact him at [tsiek@haysmed.com](mailto:tsiek@haysmed.com).*

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262.673.6815 Phone  
262.673.2650 Fax  
1550 Innovation Way  
Hartford, WI 53027

[www.apisoftwareinc.com](http://www.apisoftwareinc.com)