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Barnes-Jewish Hospital applies lean methodology to acute stroke care, maximizing resources and slashing door-to-needle times

Parallel processing, point-of-care tests produce a “mountain of change”

Providers of emergency medicine fully understand the importance of time when caring for potential stroke patients. In appropriate patients, early treatment with thrombolytic drugs can prevent the kind of brain damage that causes paralysis and loss of speech, but if this treatment does not commence within 60 minutes of the start of the stroke, the risks associated with administration of these drugs begin to outweigh the potential benefits.

EXECUTIVE SUMMARY

To improve door-to-needle times for stroke victims, a multidisciplinary team at Barnes-Jewish Hospital in St. Louis, MO, used lean methodology to identify opportunities for improvement and implement changes aimed at streamlining the care process. As a result, since first implemented in February 2011, average door-to-needle times have improved by nearly 40%, and the number of patients treated within 60 minutes has increased from 52% to 78%.

- To accelerate care, pre-hospital providers are now empowered to activate the hospital's stroke team from the field. Also, potential stroke victims are brought directly to the hospital's CT scanners rather than the typical entry point in the ED.
- While patients are at the CT scanner, all the stroke team members assemble to assess the patient and ask critical questions so that all information is shared up front with all the clinicians at the same time. This replaces a process that relied more on serial processing, in which patients would see clinicians more on a one-on-one basis.
- The ED introduced point-of-care testing for PT/INR. The move has enabled clinicians to get test results within 10 minutes rather than 40 minutes. This facilitates quicker decisions on the use of thrombolytic drugs.

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Recognizing the critical importance of the time between presentation and treatment or door-to-needle time, members of the dedicated clinical stroke team at Barnes-Jewish Hospital (BJH) in St. Louis, MO, became concerned when they started to see their times increase just a bit, explains **Peter Panagos, MD, FACEP, FAHA**, director of Neurovascular Emergencies at BJH and associate

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Editorial Questions

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professor of Emergency Medicine and Neurology at Washington University School of Medicine.

"We have been tracking our progress since 2004, and every month we would meet as a multispecialty team of emergency physicians, neurologists, nursing, inpatient and ED pharmacy, and ancillary services to look at our previous month's response to patients who present to the ED with stroke," explains Panagos. "We noticed that we were having some creep up to and slightly over our internal threshold, which was one hour."

In an effort to reverse this trend, the hospital made a conscious effort to put the entire stroke care process under a microscope, using lean-style methods to map out the flow of potential stroke victims, from the time they are picked up by an ambulance to when they receive treatment. It is an approach that lean methodology refers to as value-stream analysis. "We looked at every step along the process and determined where we were losing time and where we could make up time," says Panagos.

Some of the hold-ups identified were easier to address than others, but the results of the effort have dramatically accelerated care. Since the new treatment procedures were implemented in February 2011, average door-to-needle times have improved by nearly 40%, and the number of patients treated within 60 minutes has increased from 52% to 78%.¹

While the solutions devised at BJH are uniquely designed to fit the culture of the practice there, Panagos observes that some of the stroke-care efficiencies achieved by the institution's stroke care improvement team have already been adopted with success at other centers. (*Also, see Management Tip: Try small tests of change, p. 17.*)

Engage with pre-hospital providers

To make improvements in any stroke system, you have to consider the pre-hospital component, stresses Panagos. "If you don't engage with your pre-hospital providers, you are losing an opportunity," he says. For example, one of the changes that BJH made as result of its improvement effort was to empower pre-hospital providers to call ahead and activate the stroke team when they think they had convincing evidence that a patient was suffering a stroke. There are no repercussions if they get it wrong, says Panagos.

"To be perfect 100% of the time, you are going to miss a lot of patients, so we have empowered them to say that they think they have a stroke

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patient and to activate the team,” he says. “They are really the first responders for the stroke team at our center.”

Panagos acknowledges that to successfully make this type of change, there has to be a trusting relationship between the pre-hospital providers and the ED staff, but he notes that many EDs have nurtured this type of relationship. “A lot of emergency medicine physicians are medical directors for many EMS systems, so having that interaction, not only regarding stroke, but also many other disease processes, and being involved with education for EMTs and paramedics on a continual basis, facilitates that open dialogue,” he says.

Given that the ED at BJH has long encouraged pre-hospital providers to call ahead when they have a critically ill patient, empowering them to activate the stroke team was not a difficult change, says Panagos. However, a second improvement — a directive for pre-hospital providers to take potential stroke patients directly to the CT scanner rather than the usual entry point in the ED — required some education, he says.

“We had to really explain to them why we thought this was important and, fortunately, we have our CT scanners directly within the ED. If they were located remotely from the ED, that would have been a bigger issue,” says Panagos. “They bought into the fact that time is brain and earlier is better, and they wanted to be taken seriously in the process, which they should be.”

A bigger paradigm shift was getting the staff internally to adjust to this change because many other tasks had to be adjusted to accommodate the move. For example, now tasks like patient registration or obtaining an EKG need to be done on the fly with these patients because the traditional step of sending them to a bed has been eliminated. “That was a really big shift from our standpoint, and really a cultural shift in how we do business,” says Panagos.

Clearly define roles, responsibilities

The move also triggered a change in approach from serial processing to parallel processing, observes **Jennifer Williams, PhDc, RN, ACNS-BC**, the clinical nurse specialist in Emergency Services at BJH who oversaw implementation of the stroke care changes in the ED. “In moving patients straight to the CT scanner instead of going to a room, we allowed all the clinicians to gather in the same space at the same time so that people were hearing the same information,” she explains.

“That was a complete behavior change because it used to be that a patient would go into a room, and then we would walk him back and forth, and so the team became separated as members went in different directions.”

Now, all the members of the stroke team are hearing the same information up front, says Williams. But this also means that the team members have to share the time that is spent asking the patient questions. “Everyone is taking turns talking. You have to share, and sometimes for health care providers, that is a challenge,” she explains.

The changes did not require the addition of any new personnel, says Panagos. To the contrary, the focus was on eliminating unnecessary steps in the process. “Like most areas of medicine, it is very difficult to get additional personnel or additional resources, so what we had to do was be more efficient with our existing people,” he says. “We assigned tasks so that one person was doing one job rather than two people doing the same job and stepping on each other’s toes.”

For example, the team engaged the social worker in the ED to be the person to go out in the waiting room and try to identify family members or witnesses whenever a potential stroke victim is brought to the ED. The social worker then brings these individuals to the bedside, where clinicians can obtain added information. In addition to saving time, the approach frees up clinicians to focus their time and energy on direct patient care. “We tried to streamline our existing resources so that everyone’s role was more clearly defined and, as a result, had a little bit more time to do what they should be doing,” adds Panagos.

It took time to finesse the approach so that it worked smoothly for the patient and all the team members, notes Williams. “For the first several weeks, when we were into the process change, all the members of the leadership team, as well as the team members that helped redesign the changes, made themselves available to hear all the feedback,” she explains. “We were present as many times as we possibly could be when the stroke alerts occurred. We wrote down notes, and we tried to rapidly fix things in the moment.”

Within two weeks of going live with the new approach, the team managing the stroke care changes held a meeting to fix processes that proved problematic, and then took charge of making sure that the tweaks were communicated to everyone involved. “We used a single source of communication between all of the team members,” explains Williams. This included representatives from nurs-

ing, neurology, emergency physicians, radiology, and the pre-hospital community, she says. “We just sent out the same message to everybody about what the changes were, how we wanted to support them, and what feedback we wanted.”

Consider point-of-care testing

Another change that proved particularly challenging to implement in the ED was the introduction of point-of-care testing for PT/INR (prothrombin time and international normalized ratio). The test is important with stroke patients because when the results produce a threshold of -1.7 or higher, the patients are not eligible to receive thrombolytic drugs. However, the stroke improvement team found that performing this test put a major drag on time-to-treatment.

“We were finding that the test, which traditionally would have to go to the lab, and would take anywhere from 20 to 25 minutes, was the root cause for most of our significant outliers when we went through our value stream analysis,” explains Panagos. “So we determined if we could identify those patients [who are ineligible to receive thrombolytic drugs] in the first few minutes, as opposed to 25 minutes later, that would shave off tremendous amounts of time.”

However, introducing the new point-of-care test proved to be a big organizational change, explains Williams. “We already had several point-of-care tests in the ED, but when we added the PT/INR, we had to add it into the design we had already created in the new process,” she says.

The lab had to train roughly 160 people, including all the nurses and the techs, how to perform the test, and conduct continued quality analysis to make sure the test is being performed accurately.

However, while this point-of-care component was particularly challenging, it produced “a mountain of change,” stresses Williams. “We went from knowing the PT/INR results at 40 minutes to knowing PT/INR at 10 minutes, so we really could say ‘yes’ or ‘no’ [to thrombolytic drug treatment] pending the CT scan, which neurology would be reading at that same moment, so it made everything accelerate,” she explains.

Identify strengths, weaknesses

One of the challenges of providing care at an academic medical center is that new personnel are constantly rotating through the ED, so getting clinicians and other personnel up-to-speed on the

new stroke care procedures is an ongoing process, observes Panagos. “When our highly trained people are at the end of their month or two-month cycle in the ED, then all of a sudden we have a new team that comes on board, so our challenges might be different than someone else’s,” he says. (*Also, see: Study: Strokes are becoming more common at a younger age, p. 17.*)

However, even with this obstacle, Panagos notes that the hospital has been able to maintain improvements in door-to-needle times. Further, while it probably wouldn’t make sense for another center to emulate precisely what BJH did to improve the efficiency of its stroke care process, Panagos suggests there are certainly bits and pieces that might work well elsewhere. In fact, he notes that several centers that have consulted with BJH are now directing their pre-hospital providers to bring potential stroke patients directly to their CT scanners as opposed to the traditional ED entry point. “That is a shift in how patients normally flow, and it typically meets with a lot of resistance from many aspects of the treatment team,” says Panagos. “But once it is accepted, it is something that makes a huge difference in care.”

However, Panagos adds that this type of large-scale change requires high-level support. “You really have to have a commitment from above to take care of stroke patients efficiently, safely, and quickly,” he says. And once that commitment is in place, every hospital or ED needs to identify what its strengths and weaknesses are, what resources it has, and how those resources can best be utilized, he says.

“On average, we are probably activating our stroke team seven or eight times for every patient we ultimately treat with thrombolytic drugs, so an observant person might say that is a lot of resources to be utilized for a very low treatment rate,” he says. “I would argue that it is an appropriate amount of resources because if we can identify the patients within the first two or three minutes, or maybe within five minutes, and establish whether they are a candidate or not a candidate for [clot-busting medicine], I think it frees up a lot of resources that may have historically been tied up while trying to figure out what is going on.”

The approach also fosters collaboration between neurology and emergency medicine, while exposing residents in each specialty to clinicians who approach stroke patients from a slightly different angle, adds Panagos. “We are training and sending 12 residents in emergency medicine out into the community each

year. They are taking leadership roles in institutions all across the country, and the same thing with neurology," he says. "So if we can do this at a training level, I think our ability to implement change on a wider theater or platform is crucial. It takes a broad view, but it is really what drives a lot of what we do here as part of our training mission." ■

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Management Tip

Try small tests of change

If you want to improve your stroke care process, but your organization is not ready or prepared to make a big process leap, try a more focused, incremental approach, advises Jennifer Williams, PhDc, RN, ACNS-BC, a clinical nurse specialist in Emergency Services at Barnes-Jewish Hospital in St. Louis, MO.

"Take the thing that would be the most value-added for you, pilot it, track the data, get the feedback, and then figure out how to reinforce that process, and get front-line influence into how it fits into the workflow," she says. "Then move on to your next thing and your next step because it takes a lot of resources to turn a great big ship in a new direction."

These small, incremental tests of change can build a sense of success among the staff, and improve the chances for continued success going forward, adds Williams. ■

Study: Strokes are becoming more common at a younger age

A new study suggests that stroke may be affecting people at a younger age than used to be the case. The research, published in the October 10, 2012, issue of *Neurology*, notes that the reasons for the trend could be an increase in risk factors for stroke such as diabetes, obesity, and high cholesterol, but improved diagnostic techniques could also be playing a role.

The researchers looked at the occurrence of stroke in people between the ages of 20 and 54 in greater Cincinnati and northern Kentucky during three separate, year-long periods between July 1993 and June 1994, and the calendar years of 1999 and 2005. The investigators determined that the average age of people who experienced stroke for the first time fell from age 71 in 1993 and 1994 to age 69 in 2005.

In addition, the researchers found that strokes among people younger than age 55 became more prevalent as the years progressed. This younger group made up about 13% of the population experiencing strokes in 1993 and 1994, and 19% of the population in 2005. The researchers noted that the stroke rate in the younger-than-age-55 group grew from 83 strokes per 100,000 people in 1993 and 1994 to 128 strokes per 100,000 people in 2005, and in Caucasians from 26 strokes per 100,000 people in 1993-1994 to 48 per 100,000 people in 2005. ■

Patient-centered transfer process for patients admitted through the ED boosts satisfaction, improves safety

Administrators: To improve process, keep the focus on what's best for the patient

Many EDs have found ways to streamline their triage processes and slash door-to-provider times. Such department-level improvements are important, but eventually ED administrators have

to deal with the inpatient side of the equation for those patients who need to be admitted for further treatment. This level of improvement is typically more challenging because it requires active collaboration between the ED and inpatient staff. However, administrators at Hallmark Health, which includes Melrose-Wakefield Hospital in Melrose, MA, and Lawrence Memorial Hospital in Medford, MA, have demonstrated that hospitals can make strides in this area, improving not just patient throughput but patient safety as well.

In June 2012, the two hospitals within the Hallmark system began to implement a new patient-centered transfer process for patients admitted through the ED. Under the new process, inpatient nurses come down to the ED to take reports on newly admitted patients. This transfer takes place at the patient's bedside in a process that includes the ED care team as well as family members. The inpatient nurse then accompanies the patient up to the inpatient floor.

The approach is part of an ongoing effort at Hallmark to enhance efficiency and quality in the ED while also boosting patient satisfaction. And administrators say it has delivered on all counts. Just six months after implementation, patient satisfaction has increased by at least one full percentage point on Press Ganey surveys. And administrators anticipate that data will soon show that medical errors or omissions have decreased by at least 50%.

Focus on handoffs

The new process followed roughly two years of changes that enabled the Hallmark EDs to

EXECUTIVE SUMMARY

To improve safety and patient flow, administrators at Hallmark Health System, based in Melrose, MA, implemented a new patient-centered transfer process for patients admitted through the ED at the health system's two hospitals. Under the new approach, inpatient nurses come down to the ED to take reports on new patients in a process that includes the ED care team as well as family members. The inpatient nurses then accompany the patients up to their designated floors.

- Since the new patient-transfer process was implemented in June 2012, patient satisfaction has increased by at least one point on patient satisfaction surveys.
- Administrators anticipate that medical errors or omissions related to the handoff process will show a drop of at least 50%, when data is tabulated.

reduce patient length of stay by as much as 20%, notes Deb Cronin-Waelde, RN, MSN, ONC, system director of Emergency Services at Hallmark Health. But she emphasizes that the group managing the process was not just focused on throughput. "It wasn't good enough to just be quick. We also wanted to make sure we were doing things correctly," she says. "So we used internal data as well as external benchmarking metrics to look at patient safety."

What became clear, says Cronin-Waelde, is that there were opportunities to improve safety during the critical handoff that takes place when patients in the ED are turned over to inpatient teams.

In particular, the data showed that it is not uncommon for critical information regarding allergies or other aspects of a patient's medical history to be inadvertently omitted in the transfer process, she says. "The medical history is important to share from one caregiver to the next," she says. "It is also important that each caregiver knows the actual plan of care in the successive hours."

For example, a patient who is admitted with a diagnosis of pneumonia needs to have certain things completed at specific times, so communication about the plan of care is vital, says Cronin-Waelde.

The administrators looking at this issue were particularly impressed with the work of Atul Gawande, MD, MPH, a surgeon at Brigham and Women's Hospital in Boston, MA, who authored *The Checklist Manifesto: How to Get Things Right* (Picador 2011). In this work, Gawande talks about the use of checklists in many other industries, and how this simple concept can also be leveraged in medicine. For example, Gawande writes about how an airplane never takes off the runway without completing a checklist, and how the same type of process can greatly improve safety in the medical setting, explains Cronin-Waelde.

"We decided to model some of that, so we looked at all of the areas of communication that were important [during a handoff], and then we got a multidisciplinary team together comprised of physicians, nurses, transporters, housekeepers, and anybody who is involved in the touching of a patient and the admitting of a patient to the hospital," she says. "Everybody had their input."

The team conducted trials of several different approaches to the ED-to-inpatient transfer process, finally settling on a process that begins with a notification from the ED to an inpatient floor when a patient is expected to require admission. "That is communicated on our tracking board ...

so as that process kicks in, the charge nurse assigns the patient to the incoming nurse,” says Cronin-Waelde. “When the patient is ready to depart [from the ED], the inpatient nurse comes down to the ED and receives a bedside handoff, inclusive of the ED nurse, the ED physician provider, the inpatient nurse, and the patient, as well as any family members if they are there with the patient.”

The assembled providers follow a checklist that is sequential in order, going through all of critical information about the patient that needs to be shared. And then there is time for any of the participants to ask questions, adds Cronin-Waelde. “It is a regulatory requirement that people have the ability to ask questions at the end of the encounter,” she says. “This is great because then the patient feels like everyone knows what is going on, and a caregiver or family member has the opportunity to interject information that [the providers] may not know about.”

Conduct trials

While the handoff process is working well now, it took time for the providers involved to adapt to the new approach. “Nurses, physicians, and staff are very used to working in particular ways. We have all been trained differently in some ways,” says Cronin-Waelde.

For instance, initially the inpatient staff felt that it would be very difficult for them to leave their floors and their patients to come down to the ED, she explains. “They thought they would be off of their floors for hours, and that this would not take care of their patients,” she says. However, when they tried the process they realized that it actually eliminated a lot of back-end work that they had been doing when they didn’t have all the information they needed about incoming patients. “When you get all the information in real time at the bedside, all of that work goes away,” observes Cronin-Waelde, “so they actually gained time on the inpatient side.”

It also helped that the multidisciplinary team championing these changes took the time to conduct a trial of the reverse of this approach, in which the ED nurses would go up to the inpatient floors to give bedside reports. That approach didn’t work as well because it left the ED physician out of the equation. Ultimately, the inpatient nurses themselves realized that the better process involved having them come down to the ED to take report on the patients, says Cronin-Waelde.

“There are hundreds of nurses, so it is hard to

get everyone to really buy in until they have done it a few times and realize how much better the process is,” she explains. “That remains one of the biggest barriers for sure.”

To overcome resistance among inpatient staff, it is important to help them understand how critical it is for the ED to see patients quickly. “The ED waiting room is really the scariest place because even though we triage patients quickly, we really don’t know what is wrong with them until we get hands on and have the providers see them,” says Cronin-Waelde. “So it is a matter of getting the inpatient units to understand that the doors never close in the ED, and that we constantly have an influx of patients. That is our waiting room, but the ED is the inpatient waiting room.”

Inpatient nurses are accustomed to a more controlled environment. Once the beds on the floor are full, and the nurses each have their four or five patients, everything is settled, notes Cronin-Waelde.

Consequently, it can take some time for inpatient staff to appreciate that providers in the ED can’t attend to patients in the waiting room until they “fix the back door” and get patients who are waiting to be admitted upstairs, she says.

Stay focused on the mission

Changing the culture was one of the biggest challenges, according to Steven Sbardella, MD, the system director for the Department of Emergency Medicine at Hallmark Health. “Quite a few of our processes were aligned with our workload and responsibilities. We always would say that we have the patient in the forefront, but in reality we developed systems based on us,” he explains. “We had to let our staff realize that they had to give something up (i.e., control) in order to make the patient the priority in all aspects.”

Ultimately, the professionalism of the staff won out, says Sbardella. “They came to the conclusion themselves after looking at all the value-added data. This was a culture shift.”

Cronin-Waelde’s advice to colleagues who are interested in achieving similar improvements is to take the time to really know the process you have in place before trying to make changes. “Every hospital has different flow models, different challenges, and different processes, so the first thing out of the gate is just to observe,” she says. “Don’t make comments on it, and don’t try to change anything. Just look at it and start to get a feel for where the opportunities are.”

Once you have a firm grasp on the process you have in place, then assemble a team that includes all the players, especially the frontline staff who will have to operationalize any improvements that the team designs, says Cronen-Waelde.

Sbardella advises ED leaders to remember that it will take some time to achieve lasting improvements. "Just keep the mission or mantra up front," he says. "Is this decision the best for the patient? Just keep bringing it back to that," he says. ■

SOURCES

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Study: Long nursing shifts linked to burnout, job dissatisfaction, negative patient assessments

Experts urge administrators to guard against excessive overtime, consecutive 12-hour shifts, and rotating between day and night shifts

While the 12-hour work day has become the norm for nurses, there is new evidence that such longer shifts are not necessarily a good idea, especially when nurses work several consecutive days involving 12-hour shifts, or they are required to put in excessive amounts of overtime. A new study, co-authored by Amy Witkoski Stimpfel, PhD, RN, a post-doctoral fellow at the Center for Health Outcomes and Policy Research at the University of Pennsylvania School of Nursing in Philadelphia, PA, found that nurses working these longer shifts are more likely to experience burnout and job dissatisfaction, and patients suffer consequences as well. The researchers found that not only are patients less satisfied when the nurses who are caring for them work longer shifts, but patient outcomes are negatively impacted, too.

The three-year study, which was published in the journal *Health Affairs*, was the first to look at the relationship between nurse shift length and patient assessments of their care, according to researchers.¹ It involved nearly 23,000 registered nurses from four states: California, New Jersey, Pennsylvania, and Florida.

The researchers report that the nurses working shifts of 10 hours or longer were up to two and a half times more likely to experience burnout and dissatisfaction with their jobs than nurses working shorter shifts. Furthermore, seven out of 10 patient outcomes were adversely impacted by the longest shifts.

Confront the disconnect

Despite the negative consequences of longer shifts, nurses still tend to prefer the 12-hour schedules, perhaps because these schedules typically enable nurses to work fewer days of the week, acknowledges Witkoski Stimpfel. "It seems as though there is a disconnect there," she explains. "We do see, both anecdotally and in this work, that the nurses are overall really satisfied with their scheduling, and it seems like they are participating in choosing their schedules. But at the same time, those are the nurses who are the most burned out."

In the study, 65% of the nurse participants worked shifts of 12 to 13 hours. The researchers

EXECUTIVE SUMMARY

While nurses often choose to work 12-hour shifts, there is new evidence that too many of these longer shifts can lead to burnout and job dissatisfaction. Further, a new study suggests that patients are less satisfied with their care when nurses are working longer shifts, and patient outcomes may suffer as well. Experts recommend education around this issue for both staff nurses and nurse managers, and they urge administrators to devise sensible scheduling solutions.

- A three-year study, involving 23,000 registered nurses from four states, showed that nurses working shifts of 10 hours or longer were up to two and a half times more likely to experience burnout and dissatisfaction with their jobs than nurses working shorter shifts.
- Also, the study showed that seven out of 10 patient outcomes were adversely impacted by the longest nursing shifts.
- The Cleveland Clinic's 'parent shift' gives nurses the option of working shifts of six hours or less in exchange for less pay and no benefits. Administrators use these nurses to help their units manage busy hours or patient surges.

report that as shift lengths increased, so did the likelihood that the nurses would report burnout or an intention to leave their jobs.

Furthermore, in hospitals that had higher proportions of nurses working longer shifts, there were also higher proportions of patients providing poorer overall assessments of how well the nurses communicated, how well their pain was controlled, and how responsive the nurses were when the patients needed help.

While it is not entirely clear why nurses would choose schedules that result in more burnout and dissatisfaction, Witkoski Stimpfel advises organizations to find out what their staff and administrators know about this issue. "Then do some staff education to help them start doing self-scheduling, and if they are choosing these [longer shifts], watch out for multiple consecutive long shifts in a row, and any rotating between day shifts and night shifts," she explains.

Another good option for management is to offer more flexibility in the hours nurses can choose to work. "Some places are starting to implement shifts as short as four hours, and they allow for nurses to come in and work [for shorter stints] during peak times or shift changes," observes Witkoski Stimpfel. "This helps to give options to nurses who don't want to work such long hours."

Management can also take steps to enable nurses to say "no" to overtime or "no" to coming in on scheduled days off, adds Witkoski Stimpfel. "At some hospitals, if you get a call to come in, it is expected that you come in," she says.

Consider flexible scheduling options

One health system that has introduced new solutions in the nurse shift arena is the Cleveland Clinic. In 2008, the health system launched a program that enables nurses to choose to work six hours or less on an as-needed basis. "The program was aimed at helping nurses who had left the workforce to be stay-at-home moms to be able to come back into the workforce, and so it got the name 'parent shift,'" explains Nancy Albert, PhD, RN, CCNS, NE-BC-FAHA, FCCM, the Cleveland Clinic's senior director, Nursing Research and Innovation.

However, Albert points out that the program is not just used by parents. She notes, for example, that many nurses choose to work the parent shift while they are students working toward advanced nursing degrees. "It is really meant to help units and floors overcome the burdens associated with

incoming patients, patients being discharged, or patients going to the lab, X-ray, or other parts of the hospital for tests or treatments," she says.

While meeting the needs of nurses, the parent shift provides staffing flexibility to administrators. During the day shift, There is a lot going on in terms of nurses being interrupted and trying to do the best job they can for patients, explains Albert. "Having a nurse come in at 10 a.m. and having them stay until 2 p.m. can offer the nurse who is assigned as a patient care giver a lot of relief."

A parent-shift nurse can enable a staff nurse to take a lunch break, but she can also help to ensure that patients get their medicines on time, or get to tests and procedures when they are supposed to, says Albert. "Every manager who uses these parent-shift nurses may use them in a different way," she says.

Several EDs within the Cleveland Clinic Health System make use of the parent-shift nurses, according to James Bryant, RN, MSN, CEN, CCRN, NEA-BC, the associate chief nursing officer for Emergency Services. He explains that each ED is able to use these nurses in a customized way to meet the specific needs of the facility. The approach also enables the EDs to offer the nurses added scheduling flexibility, and he notes that a handful of nurses in Cleveland Clinic EDs take advantage of this option.

Ability to delegate is key

Nurses who choose to work the parent shifts are able to select the days and hours that they want to come in as long as these shifts also meets the needs of the nurse manager in their unit or department, explains Albert. "There has to be a good match between the desires of the nurse and the manager on that floor. Then it works wonderfully," she says.

However, in exchange for this flexibility, there are significant trade-offs. Parent-shift nurses receive no benefits, and they receive lower salaries than regular staff nurses. "There has to be an incentive for someone to work full-time and also to work a full shift," explains Albert. "The parent-shift nurses may not have a full patient assignment, so they don't have the same level of stress or the same burdens that a typical staff nurse would have."

Despite these trade-offs, the parent shift has proven popular with nurses who may not be able to work on a full-time basis, but want to maintain their skills and stay involved in their profession.

"The parent-shift people don't have to work any holidays, so it offers them great flexibility, and they get the rewards of having some interaction on the worksite, and keeping up-to-date in their skills," says Albert.

A key advantage for Cleveland Clinic hospitals is that these nurses are fully trained and oriented to the culture on the floors where they work. "It is not like we are bringing on people who are strangers to the floor; these are team members," says Albert. "They enable us to ensure that we are delivering the highest quality of care even when there are unit stressors going on like a lot of admissions coming in at once, or patients who need to travel to other floors for tests or procedures."

While nurse managers who elect to make use of parent-shift nurses must provide for these nurses in their budgets, there is no evidence that the approach has presented any administrative challenges, says Albert. However, for the program to work, she stresses that staff nurses need to feel comfortable collaborating with and delegating tasks to the parent-shift nurses. "Every floor has to decide how to best use these nurses so that they can be as effective as possible," she says.

Managers need to take the lead

While options like the Cleveland Clinic's parent shifts are helpful, Witkoski Stimpfel does not see 12-hour nursing shifts going away, and she doesn't recommend that. However, she is hopeful that education about this issue will help both managers and individual nurses move toward sensible scheduling solutions. For example, she notes that nursing administrators can take steps to limit the number of 12-hour shifts that are clustered together, using more of a mix of 12-hour and 8-hour shifts. Another alternative would be to offer some type of hybrid schedule in which nurses provide direct patient care for eight hours and then do committee work or administrative tasks for the remaining four hours of a 12-hour shift, adds Witkoski Stimpfel.

When people are really fatigued, performance suffers, adds Witkoski Stimpfel. "Our brain kind of tricks us. We feel OK, but we don't realize how impaired we might be," she says. "By scheduling smarter, we can avoid some of that because it is really hard to tell when you are at the point when you might be unsafe in practice."

It is going to take time to change a culture in which it is expected for nurses to work these longer shifts, adds Witkoski Stimpfel. This is why

managers need to take the lead on providing education around this issue and providing support for a healthier balance in scheduling, she says. ■

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Study: Higher rates of ED visits among children with autism point to need for greater training of ED staff, more comprehensive outpatient mental health care

New research comparing mental health-related ED visits between children with and without autism spectrum disorders has found that pediatric ED visits are nine times more likely to be for psychiatric reasons if the child has an autism spectrum disorder (ASD) diagnosis. In addition, researchers reporting in the journal *Pediatric Emergency Care* note that the likelihood of a psychiatric visit is higher if a child carries private health insurance.¹

Investigators from the Kennedy Krieger Institute's Center for Autism & Related Disorders in Baltimore, MD, note that the higher rates of ED visits among children with autism show that many children with an ASD diagnosis are not receiving the kind of outpatient mental health

care that could help families manage or prevent the type of crises that are prompting them to seek care in the ED. In the study, the leading cause of ED visits among children with ASD was “externalizing symptoms,” such as severe behaviors tied to aggression.

To carry out the study, investigators used the 2008 National Emergency Department Sample, the largest all-payer ED database in the United States, to examine data from nearly 4 million ED visits for patients aged 3 to 17. About 13,000 of these visits were from children with ASD. The mental health-related visits were based on the International Classification of Disease (ICD) billing diagnoses that included mood, anxiety, psychotic disorders, suicide, self-injury, and externalizing behaviors such as aggression.

When examining the influence of different types of insurance on the likelihood of an ED visit for psychiatric reasons, the researchers found that children with an ASD whose families had private medical insurance were 58% more likely to visit the ED for a mental health-related reason than families on medical assistance programs. Investigators believe this is because private insurance plans often exclude autism from behavioral health coverage, have few in-network providers, or place restrictive limits on the amount of mental health coverage they will provide.

The authors note that the study highlights the urgent need for more comprehensive outpatient mental health care and insurance coverage for children with autism. In addition, they point to a need for greater education and training for emergency medical staff about how to properly assess and interact with children on the autism spectrum.

The ED is not an ideal setting for children with ASD because chaotic environments can exacerbate autism-related or comorbid psychiatric symptoms, according to the researchers. But they say with one in every 88 children in the United States diagnosed with ASD, current trends regarding ED use are likely to continue. The researchers add that some EDs may need to consider the creation of a separate area for children with ASD that is removed from the stimulation of the main ED. ■

REFERENCE

1. Kalb L, Stuart E, Freedman B, et al. Psychiatric-related emergency department visits among children with an autism spectrum disorder. *Pediatric Emergency Care* 2012;28: 1269-1276.

CNE/CME INSTRUCTIONS

HERE ARE THE STEPS YOU NEED TO TAKE TO EARN CREDIT FOR THIS ACTIVITY:

1. Read and study the activity, using the provided references for further research.
2. Log on to www.cmecity.com to take a post-test; tests can be taken after each issue or collectively at the end of the semester. *First-time users will have to register on the site using the 8-digit subscriber number printed on their mailing label, invoice, or renewal notice.*
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the last test of the semester, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the evaluation is received, a credit letter will be sent to you. ■

CNE/CME OBJECTIVES

1. Apply new information about various approaches to ED management.
2. Discuss how developments in the regulatory arena apply to the ED setting.
3. Implement managerial procedures suggested by your peers in the publication. ■

COMING IN FUTURE MONTHS

- | | |
|---|---|
| ■ New models to address super utilizers | ■ Addressing problem drinkers in the ED |
| ■ Putting ergonomic considerations on the back burner | ■ New approaches to providing emergency care for sickle cell patients |

CNE/CME QUESTIONS

1. According to **Peter Panagos**, MD, FACEP, FAHA, To make improvements in any stroke system, you have to consider:
 - A. the ED budget
 - B. the pre-hospital component
 - C. the needs of frontline staff
 - D. where the CT scanners are located

2. According to Panagos, how many times for every patient that is treated in the ED at Barnes-Jewish Hospital do they activate their stroke team?
 - A. 3 or 4 times
 - B. 10 to 12 times
 - C. 15 to 20 times
 - D. 7 or 8 times

3. According to **Steven Sbardella**, MD, what was one of the biggest challenges involved with implementing a new patient-centered transfer process for patients admitted through the ED?
 - A. changing the culture
 - B. overcoming physician resistance
 - C. training the charge nurses
 - D. getting the hospitalists on board

4. Before embarking on a process improvement effort, **Deb Cronin-Waelde**, RN, MSN, ONC, advises colleagues to:
 - A. meet with senior staff
 - B. visit other hospitals that have implemented similar improvements
 - C. take the time to really know the process that is already in place
 - D. bring in a consultant to manage the change

5. A new study, co-authored by **Amy Witkoski Stimpfel**, PhD, RN, found that as nursing shift lengths increased among 23,000 nurse participants, so did the likelihood that the nurses would report:
 - A. burnout or an intention to leave their jobs
 - B. as sick for subsequent days
 - C. problems with their coworkers
 - D. all of the above

6. According to **Nancy Albert**, PhD, RN, CCNS, NE-BC-FAHA, FCCM, while meeting the needs of nurses, the Cleveland Clinic's "parent shift" provides:
 - A. peace of mind
 - B. added stress
 - C. more red tape
 - D. flexibility

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