The 12-Hour Shift and Oncology Nurse Fatigue

The latest evidence about the harms of wearing schedules, and ongoing efforts to help nurses cope

BY SARAH DIGIULIO

A recent study showed that nurses were very satisfied working longer-shift-length schedules—with shifts lasting 12 or more hours—even though the data also showed that nurses working the longest shifts were among those most likely to experience burnout and job dissatisfaction. And, patients treated at the hospitals where nurses worked the longest shifts were the most likely to be dissatisfied with their care (see box on next page).

“We saw that when nurses work these long shifts their well-being is compromised and patient care may be negatively impacted as well,” the study’s lead author, 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, said in a phone interview. “We were able to link for the first time nurses’ work hours with patient satisfaction, too.”

Hospitals have been using 12-hour shift schedules for a while, but there is more evidence now than ever before showing why such schedules can be problematic, said Patricia Potter, RN, PhD, FAAN, Director of Nursing Research at the Siteman Cancer Center at Barnes-Jewish Hospital and Washington University Medical Center in St. Louis. Her research has helped define the prevalence of “compassion fatigue”—a combined measure of secondary traumatic stress and burnout—in oncology nurses and care providers.

Oncology nurses, who see the same patients on a routine basis for treatment and follow-up, develop relationships with their patients, Potter said. And seeing a patient’s disease worsen or recur can be stressful for oncology nurses. “Rigorous chemotherapy regimens and radiation can lead to serious side effects that can complicate sustained disease symptoms,” she said.

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It’s the continued stress nurses endure, due to long shifts and other factors, that causes problems. Physiological research has shown that under continued stress, executive functioning does not work well, continued on page 2.
The recent study led by Amy Witkoski Stimpfel, PhD, RN, surveyed some 22,275 registered nurses working in 577 hospitals across California, New Jersey, Pennsylvania, and Florida, about their shift length, job satisfaction, and likelihood of burnout (Health Affairs 2012;31:2501-2509). The key findings:

- A majority of nurses reported being satisfied with their schedule independent of their shift length: 85% of nurses working eight- to nine-hour shifts reported being satisfied, and the rates were 82%, 88%, and 84%, respectively, for nurses working 10- to 11-hour shifts, 12- to 13-hour shifts, and longer than 13-hour shifts.

- Nurses working the longest shifts were also most likely to report the highest burnout scores based on the Maslach Burnout Inventory (MBI). Fifty-six percent of nurses working shifts longer than 13 hours reported MBI scores greater than 27, compared with 44% of nurses working 12- to 13-hour shifts, 31% of nurses working 10- to 11-hour shifts, and 20% of nurses working 8- to 9-hour shifts.

- Nurses working the longest shifts were least likely to report being satisfied with their job: 57% of nurses working shifts longer than 13 hours reported being very or moderately satisfied with their job compared with 75% of nurses working 12- to 13-hour shifts, 65% of nurses working 10- to 11-hour shifts, and 76% of nurses working 8- to 9-hour shifts.

- For a subset of 16,241 nurses in 396 hospitals, the study also analyzed patient-reported satisfaction levels by hospital. Patients were more likely to report dissatisfaction with care at hospitals with higher percentages of nurses working 12-hour shifts or longer, and patients reported the highest levels of dissatisfaction at hospitals with the highest percentage of nurses working shifts longer than 13 hours.

- She and her colleagues urged nursing leaders to encourage workplace cultures that respect nurses’ days off and vacation time, promote nurses’ prompt departure at the end of a shift, and allow nurses to refuse to work overtime without retribution.

There is now more awareness of the on-the-job stressors nurses face, Potter noted. “I had compassion fatigue years ago and had no idea what it was. But, now we’re wrapping our heads around it—people are figuring out ways to help reduce the impact of it.”

Under continued stress, executive functioning does not work well—that means poor decision-making, reduced communication, and impaired memory. "The biggest problem with working while you’re fatigued is that you are probably the last person to be aware of how fatigue is affecting your judgment,” said Jeanne M. Geiger-Brown, PhD, RN, FAAN, Assistant Dean of Research and Associate Professor at the University of Maryland School of Nursing. Longer shifts are associated with more errors in patient care, higher rates of needle stick injuries, and increased risk of motor vehicle collision due to drowsy driving, according to her analysis of more than a decade’s worth of research on the topic published in the Journal of Nursing Administration (2010;40:100-102).

“People have an overabundance of confidence that they are doing ok and often don’t recognize their own level of fatigue and how it’s affecting them.”

One of Geiger-Brown’s studies, which recorded nurses’ sleep patterns during three successive 12-hour shifts, showed that nurses reported sleeping about 5.5 hours consistently between shifts during their time off, and that the level of fatigue varied (Chronobiology International 2012;29:211-219). A third of the nurses reported feeling high levels of fatigue during shifts—the most common complaint being that the nurse did not feel recovered at the start of the next shift. “And if you keep going like that for any length of time—when you don’t have adequate recovery between shifts—that can lead to burnout and cause physiological problems,” she said.

Another problem is that because having many 12-hour shift rotations means that nurses are scheduled to work only three days a week at their hospital, some nurses then go on to work three 12-hour shifts at another hospital on their days off.
Geiger-Brown explained. Data collected in 2006 from a sample of 2,273 nurses in two states for the Nurses Worklife and Health Study showed that about 28 percent of the nurses worked 12 or more hours per day and one-third worked more than 40 hours per week—19 percent worked 41 to 49 hours per week, eight percent worked 50 to 59 hours per week, and six percent worked 60 or more hours per week (American Journal of Nursing 2006;106[4]:60-71).

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Managing Stress
Most nurses do not learn about compassion fatigue in schools—and that needs to change, Potter said. “If you continue on the path of dealing with constant stress in your work role, you’re going to get burned out. By recognizing that this is something everyone experiences, it helps nurses realize there’s something that can be done—that they are not alone.”

Potter and her colleagues developed an education program at Siteman led by a multidisciplinary team of nurses, pastoral care, human resource professionals, and social workers to educate oncology nurses about compassion fatigue, how it is connected to stress, and how to manage it.

The one-day, eight-hour class is offered to nurses and all hospital staff twice a month. Participants learn how to minimize the perception of stress at any point they may perceive a threat. They are taught a simple exercise to learn how to relax and focus on their work role, you’re going to get burned out, for sure.”

Hospitals have a responsibility to avoid staffing schedules likely to cause fatigue—but, individual nurses also need to take responsibility for their own fatigue level. They have to understand what their capacity for work is and pick a schedule they can tolerate.

3. Self-validation: Participants are taught to feel good about what they are able to accomplish—and not rely on others’ opinions.

4. Connection: The class teaches nurses how to connect with others in their field, and how to share disciplinary experiences as caregivers. “You need somebody who will take the time to listen and respect what you have to say, and then you need to reciprocate.”

5. Self-care: Class-goers are taught to separate work from home and social life, so they can return to the work setting refreshed and ready to face each new day of caring for patients. “You have to be able to exercise, to be more creative, to sing, dance, or do whatever you like to do so that you can refuel.”

Data from a pilot study of the program (scheduled for publication later this year in Oncology Nursing Forum) showed significant improvements for the oncology nurses who attended the classes, Potter said.

The Science of Scheduling—and Other Remedies
Geiger-Brown is currently in the early stages of a study to determine if predictive modeling software can be integrated into a nurse scheduling system. The software—which is used to manage schedules for other safety-sensitive occupations, such as for airline pilots and truck drivers—uses mathematical models to predict an individual’s risk of fatigue based on characteristics specific to that individual (such as how many shifts they’ve worked over the last week and their sleep patterns, for example).

Geiger-Brown is also involved in research testing online training programs that teach nurses about sleep and...
scheduling so they can better cope with 12-hour and longer shifts. The training covers such topics as appropriate napping, reasonable use of caffeine, and how to create a better sleep environment, she said.

She emphasized that although hospitals have a responsibility to avoid staffing schedules likely to cause fatigue, individual nurses also need to take responsibility for their own fatigue level. That means that during time off, they have a responsibility to maintain a healthy lifestyle, getting adequate rest, eating healthy, and exercising regularly. “And they have to understand what their capacity for work is and pick a schedule they can tolerate,” she said.

Solutions like using software and providing more education for staff are up to individual hospitals to adopt. “Change is always hard—but, hospitals’ first priority is patient safety. So, one of the barriers is helping hospitals understand that a well-rested nurse is actually part of patient safety.”

What are some of the challenges—specific to the field of oncology—that nurses face?

“Our nurses are dealing with people who are navigating and trying to overcome heavy challenges related to cancer—not only the treatments, but the side effects related to those treatments. Staff bond closely with patients, and it’s difficult to see someone you care for and grow to value suffer in a way that many of our cancer patients do.

“Our patients and their families are often faced with making end-of-life decisions. The process can be drawn out—and can weigh on the nurses as they watch their patients struggle through this time because they value the dignity of their patients.

Plus, our nurses play many different roles—they have family responsibilities, some are pursuing continuing education, and they’re handling their patients. All of these different responsibilities take a toll.”

Why did you decide to start the program?

“We had inquiries from nurses. Supervisors were made aware, in conversations with the nursing staff, that the nurses needed some kind of program or some kind of resource continued on page 5
dedicated to supporting their emotional well-being. Outside of the day program, we did not have something for the nurses here on campus. The nursing leadership wanted to look into the possibility of providing such a program—and we [the pastoral care team] were more than happy to work on facilitating it.”

What happens during a typical session?
“The session starts with an icebreaker, such as sharing the funniest experience or event of the week, or just sharing some light moments or jokes—to get the right, friendly atmosphere. We also have a segment of meditative music. We ask the staff to reflect, and share how the words are impacting them. “There’s time for the staff to reflect on the lives of the patients they have treated and those who may have passed on. We keep a list for the prior month of the patients who have passed on during that time, so the nurses and staff have time to memorialize those patients and honor their journeys—and recognize the roles they themselves have played in the lives of those patients and their families.

“We want to encourage speaking and communication. We encourage all nurses to share: What’s been going on at home or here that might be weighing on your mind? Or, what might be challenging? What are some of the ways you have been or are dealing with it? What kind of support do you need to deal with it? How is it impacting you?”

How does all the talking help?
“We encourage participants to have these conversations not only with the facilitator, but with each other. And, this helps because you find that sometimes even though people may be experiencing similar challenges, because they have not necessarily been talking, they may not be aware of it. So, here in this group there is the opportunity to encourage conversations about those things.

“The nurses and staff get validation that someone cares about what’s going on in their lives, which provides the kind of support they need. For them, it’s not just a matter of coming to work, getting the work done, and getting on with your life. Their jobs impact their lives—and we want them to understand we can support you and walk with you through whatever is going on in your life.”

What type of feedback have you gotten from nurses who have participated?
“The nurses have been very vocal in their appreciation for the program. I’ve heard them say they find it very comforting, and they appreciate the opportunity to be able to release some of the emotional burdens they may have been carrying for a while. They say they are really able to get relief through the interactions they have in the program. They say being able to talk freely about the things they are experiencing—having the opportunity to talk about depression and grief—has been very helpful.

“The fact that someone is willing to come on their turf, so to speak, and be a listening presence and a supportive presence is—we’ve been told by our nurses—really valuable.”

How does the program play a role in the overall quality of care at the hospital?
“It really boosts morale for the floor. Anything that helps our nurses and staff invariably helps our patients as well—because it boosts the staff’s ability to deliver more effective care to the patients and to be much more focused in all the services they provide. So, it absolutely enhances the quality of care that we are able to give to our patients and their caregivers.”

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