Meet Mr. Chicago. He is a registered nurse and a frequent contributor to NursingLink.com, a popular online forum for nurses. In a May 2009 blog discussion, Mr. Chicago let everyone know that he was pleased with his schedule and ecstatic over the money he could make. Here’s what he had to say:

*I work every other weekend and overtime is basically endless. I can make as much as I want.*

Not really a surprising statement. In fact, according to a 2004 study entitled *The Working Hours of Hospital Staff Nurses and Patient Safety,* that tracked the work patterns of 393 registered nurses over 5,137 work shifts, one-third of the nurses reported working some overtime every day. Two-thirds reported working overtime at least ten times during the two week survey period. They also reported that overtime work was mandated in 10% of the shifts.

On the surface, mandatory and voluntary overtime programs appear to be an attractive solution to health care facilities that are looking to cut costs, hold down personnel expenses and still operate with full staffs. Look at it from an administrator’s perspective:

- Though overtime pay is higher than a nurse’s normal hourly pay rate, it typically doesn’t include any loaded expenses such as benefits. In many cases, this makes an overtime hour less expensive than a fully loaded hour for an agency or float pool nurse.
- It’s easy, it’s convenient and facilities are working with nurses who already know the hospital, the unit, the patients, and the other staff members.
- Just like *Mr. Chicago* above, it’s a nice perk for some staff nurses who want to make some extra money.

**All That Glitters Is Not Gold**

Unfortunately, even if we ignore the potential for system manipulation and gamesmanship among nurses vying for overtime shifts, voluntary and mandatory nurse overtime programs have a significant negative impact on patient safety and the financial well-being of health care organizations. In fact, according to a variety of studies, the fatigue and nurse burn-out resulting from overtime programs create significant risk in three critical areas that drive increased costs to health care organizations:

- Quality of patient care
- Patient care error cost
- Nurse absenteeism and turnover

![Risk of error almost doubled when nurses worked greater than 12.5 consecutive hours](image)
Patient Quality Care

The stress and fatigue caused by overtime hours are real. In fact, other industries have been much faster than healthcare to recognize the correlation between the two and take action. The U.S. National Transportation Safety Board (NTSB) blames fatigue as a probable factor in 20-40% of all crashes. For this reason, by law, airline pilots are restricted to eight hours of flight time per day, with a minimum of eight hours off between shifts. Likewise, train operators and truck drivers are limited to 12-hour shifts, with a minimum 10-hour break between shifts.

Over the past several years, there have been a growing number of research studies and papers reviewing nursing staff overtime and its negative impact on patient safety and quality of care. Both the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and the International Council of Nurses (ICN) list nurse overtime and fatigue as key contributors to patient sentinel events and a threat to a nurse’s ability to provide quality patient care.

Perhaps most significant are findings from Dr. Ann Rogers in her research study conducted for the Agency for Healthcare Research and Quality, which found:

- The likelihood of making errors increases with longer work hours
- Working overtime increases the odds of making at least one error, regardless of how long the shift was originally scheduled
- The odds of making an error are three times higher when nurses work a shift of 12.5 hours or more

According to Dr. Lucien Leape’s research from *Harvard Medical Practice Study I*, approximately 100,000 patients die annually in the United States due to medical mistakes. Put in airline terms, that’s the equivalent of 200 fully loaded 747s crashing each year. Yet there remain no industry regulations restricting nurse work hours. Imagine if you will, your family member or loved one is in a hospital being cared for by a well intentioned nurse working her 13th consecutive hour. If you knew this, would you feel comfortable?

Patient Care Error Cost

Compounding the growing concerns over nurse overtime and patient care is the associated cost surrounding the patient care errors that occur. Some experts estimate as many as one million patient care errors occur each year in the U.S., and the resulting cost to rectify those errors grows annually.

The most obvious expenses are those directly remedying the initial error and include excess care costs, additional in-patient stay time, and any resulting legal costs and awards. On top of these, there are the indirect costs which can include the associated expense of internal reviews, increased risk management activities and documentation, possible accreditation and licensure threats, and increased liability coverage costs.

Though the true financial impact of patient care errors on a national level is difficult to determine, the Michigan Nurses Association, in a study prepared by the Public Policy Associates, estimated that the annual savings the state could realize by minimizing patient errors through the reduction of nurse overtime hours totaled $34 million in direct hospital costs.
Nurse Absenteeism and Turnover

While some nurses, such as Mr. Chicago, enjoy the opportunity to make extra money from working overtime, research also shows that long-hours and frequent overtime is one of the leading causes of nurse absenteeism and turnover.

A Canadian study entitled *Why Nurses are Calling In Sick: The Impact of Healthcare Restructuring*, found that overtime and fatigue are directly associated with increased absenteeism and job dissatisfaction. It also reported that nurses use over twice the number of annual sick days compared to other workers, with approximately 12% of nurse absences directly related to fatigue associated with overtime.

The cause and effect of this reality creates a vicious cycle within healthcare. Hospitals require overtime hours from nurses to help ensure proper patient coverage. The increased hours lead to nurse fatigue and dissatisfaction, resulting in higher absenteeism and turnover. In turn, this means that hospitals have more call outs, open shifts and unfilled nurse jobs, requiring their staff to work additional overtime.

This endless loop creates workforce stress, turnover and ultimately, drives increased operating and patient costs for hospitals. In a Voluntary Hospitals of America (VHA) review of 235 hospitals, they found that hospitals with higher turnover rates exhibited longer patient stays and higher per-patient costs. In fact, length-of-stays were on average a full day longer with costs running almost $2,000 higher per discharge.

In addition to higher patient costs, operating expenses also increase at facilities with high attrition. Premiums, differentials and overtime pay spent to cover nurse shortages add up quickly. On top of that, it’s estimated that the cost to replace a nurse is approximately equivalent to the person’s annual salary. In effect, hospitals will pay double the cost – paying both salary and replacement cost – for every nurse they lose.

The Bottom Line

For many facilities across the United States, overtime programs have long played an important role in their staffing strategy. But a growing body of research is proving this practice drives up operating expenses while being counter-productive to providing quality patient care. Given today’s tools, technology and resources to effectively analyze demand, optimize staff scheduling and implement a comprehensive staffing plan, overtime can be effectively, and mercifully, dropped from today’s health care reality.

Workforce Insights, developed and distributed by Supplemental Health Care, provide healthcare facilities with fact-based information and new perspectives on workforce issues.

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