Fact Sheet 2004-3

THE COSTS AND BENEFITS OF SAFE STAFFING RATIOS

The United States is experiencing a severe shortage of nurses that will intensify as baby boomers age and the need for health care grows. While registered nurses are expected to experience the largest job growth in the next 10 years, a study by Peter Hart and Associates found one in five quitting patient care. Most are leaving because of inadequate staffing. There are insufficient nurses to do what needs to be done on any given shift and those who are on duty are exhausted and stressed.[1,2] Adequate nurse staffing is key to patient care and nurse retention, while inadequate staffing endangers patients and drives nurses from their profession. Some hospitals have had success in retaining their nurses by raising nurse-to-patient ratios, involving nurses in decision-making and providing nurses with opportunities to further their education. Turnover dropped from 15.3% in 2000 to 10.3% in 2002 at New York Presbyterian Hospital, a hospital which now has a safe staffing clause in its contract.[3] Not coincidentally, a November 2003 study by the Institute of Medicine of the National Academy of Sciences calls for better nurse-to-patient ratios, limits on mandatory overtime, and nurse involvement at every level to protect patients.[4]

Understaffing Endangers Patients' Lives

- The Institute of Medicine concluded that the environment in which nurses work is a breeding ground for medical errors which will continue to threaten patient safety until substantially reformed. The study finds increased infections, bleeding, and cardiac and respiratory failure associated with inadequate nurse staffing.[5]
- $ A 2002 report by the Joint Commission on Accreditation of Healthcare Organizations stated that the lack of nurses contributed to nearly a quarter of the unanticipated problems that result in death or injury to hospital patients.[6]
- $ A recent study by Linda Aiken, PhD, RN, and others, found that for each additional patient over four in a nurse's workload, the risk of death increases by 7% for surgical patients. Patients in hospitals with the lowest nurse-to-patient ratio (eight patients per nurse) have a 31% greater risk of dying than those in hospitals with four patients per nurse. On a national scale, staffing differences of this magnitude may result in as many as 20,000 unnecessary deaths each year.[7]
- $ Another recent study found that patients at hospitals with staffing ratios of four patients to one nurse or higher suffered from cardiac arrest or shock 9.4% more often than patients at hospitals with ratios of 2.5 patients to one nurse or lower. They also had 9% more urinary tract infections, 5% more gastro-intestinal episodes, and 6.5% more cases of pneumonia acquired in the hospital. Surgery patients in short-staffed hospitals were 6% more likely to die from complications like shock or sepsis.[8]

While the most important results related to inadequate nurse staffing are unanticipated patient complications and deaths, other costs include longer hospital stays, higher rates of occupational injury and stress among nurses, more turnover among nurses, and more liability for hospitals. In 1999, the Institute of Medicine estimated that preventable medical errors cost $17 billion each year.[9]

Understaffing Results in Longer Hospital Stays

- In 2001, 69% of hospital executives reported that the shortage of nurses had resulted in higher costs to deliver care.[10]
- A 2001 Harvard School of Public Health study cites a 3 – 6% shorter length of stay for patients in hospitals with a high percentage of RNs.[11]
- The Institute for Health and Socio-Economic Policy projects annual savings of about $2 billion a year for California hospitals just from the shorter patient stays that result from better RN staffing. The findings are based on an examination of 21.7 million patient discharges in California from 1993-1998 and hospital charges per patient day.[12]

High Nurse Turnover Is Expensive

Nearly 90% of nurses say that better staffing ratios would improve recruitment and retention of nurses.[13]

The Advisory Board Company for the Nursing Executive Center estimates the cost of replacing a hospital medical/surgical nurse as $42,000 in 2000; the cost of replacing a specialty nurse was $64,000.[14]

$ Organizations with high annual RN turnover rates (22% - 44%) had 36% higher costs per discharge than hospitals with turnover rates of 12% or less. Hospitals with low turnover had lowered risk adjusted scores as well as lower severity-adjusted length of stay compared to hospitals with 22% or higher turnover rates.[15]

$ Hospitals with low RN turnover (4 – 12%) averaged 23% return on assets compared to a 17% return for those with high turnover rates.[16]

$ Over 40% of hospitals offer bonuses to new hires according to the American Hospital Association. Most offer packages of between $1,000 and $5,000, but some offer even more compensation.[17] This policy does nothing to reward and retain experienced nurses and can certainly create resentment.

$ Nearly 60% of hospitals hire nurses from temporary agencies or traveling nurse companies.[18] Nationally, hospitals spent $7.2 billion on temps and travelers in 2000.[19] Temps and traveling nurses earn as much as $100 an hour, while staff nurses typically earn less than $25 per hour, which affects morale among the nurses who stay.[20]

$ Hospitals also recruit nurses from other countries, which removes badly needed healthcare providers from poor countries, while also depressing nurses' wages here.

These solutions do nothing to address the underlying reason why so many qualified nurses leave the profession. Better nurse-to-patient ratios would, however.

What Will Safe Staffing Ratios Cost Hospitals?

- A University of California at Davis study estimates it will cost California hospitals $1.1 billion annually to implement a ratio of four patients to one nurse in medical/surgical units, the standard approved by the SEIU Nursing Alliance, United Nurses' Associations of California, and Kaiser Permanente.

Berliner, *et. al.*, have criticized UC Davis study on several methodological grounds, pointing to assumptions which inflate the estimate by 35% to 40%, as well as data collection issues, placing the estimate below $500 million.[21] The assumptions include failing to distinguish between for-profit and non-profit hospital, although for-profit hospitals have the leanest staffing ratios and can best afford to implement improved staffing ratios; assuming that nurses cannot be transferred from a unit

where there is a surplus of staff to a unit which is short; assuming that only full-time nurses would be hired, when 35% of nurses in California work part-time; and defining the cost of hiring a new nurse as the average nurse salary, when it is plausible that many will be entry-level or part-time.[22]

- Although the validity of the UC Davis study is questionable, even if the estimate of $1.1 billion is accurate, the cost is only a 2.3% increase for California's $40 billion industry divided among 500 hospitals.[23] Moreover, inadequate nurse staffing is costly; safe staffing ratios will allow hospitals to save on costs associated with patient complications and liability, nurse turnover, temp agency fees, and recruiting.
- A 2002 report by Blue Cross Blue Shield Association found that California hospitals could save over $331 million if all hospitals performed at the level of the best hospitals in the state in terms of these quality indicators: adverse events, wound infection, pneumonia after surgery, and urinary tract infections.[24] These indicators are well-established measures of nurse staffing quality.

If Berliner and colleagues' estimate of $500 million as the cost of safe staffing levels is accurate, the direct costs of complying with the California safe staffing law would be almost completely offset by the benefits of improved nurse staffing quality.

Nurses Return to Nursing When Safe Staffing Ratios Are Implemented

- The California Board of Nursing reports being inundated with RN applicants from other states because of the nurse-to-patient ratio regulations that went into effect in January 2004. With a more than 60% increase in applications for licenses it now takes six or more weeks to get a temporary license and as much as three or four months to get a permanent one.[25]

California has experienced more interest in nursing since the nurse ratio legislation was passed in 1999.

$ The number of RNs increased by 4% from June 2001 to June 2002 and the number of certifying exam applicants rose by 18%.[26]

$ Kaiser Permanente voluntarily enacted ratios before the California law went into effect in July 2001. As a result, the Northern California branch of Kaiser hired 71% more new nurses and the number of nurses quitting declined by 47% from January to October 2002, a net increase in RNs of 570% over the previous year.[27]

- Testimony from California RNs confirms the benefits of staffing ratios. A study by UC San Francisco's Center for Health Professions found that nurses from California express concern about staffing more than any other topic, regardless of whether they work for for-profit or non-profit healthcare organizations or whether they belong to a union. Staffing ratios have been required in critical care units in California hospitals and nurses consistently cite ratios as a draw to work in these units because they know they will be able to provide high quality care to their patients.[28]

The nurse crisis is a global phenomenon. In 2000, the Australian state of Victoria implemented staffing ratios as part of a strategy to recruit and retain nurses in their state and met with remarkable success.

- Six months after the ratios were fully implemented, 3,300 nurses returned to work full-time.[29]
- A preeminent technical institute in Victoria reported that the number of graduating students planning to study nursing increased by 144%.

- One major hospital reported that its costs for temp agencies fell by 83%. Another hospital reported that its costs for temp agencies fell by 83%, while yet another major hospital now has 19 nurses on a waiting list to work in its emergency department.

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