



NURSING MATTERS

Nursing Matters fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.

Nurse-to-Patient Ratios

Fact Sheet

Background

Healthcare systems worldwide are stressed by limited resources and increasing demands on their services. Nurses, as the largest group of healthcare professionals, have experienced significant changes in their work life and environment as systems have tried to meet these challenges (e.g. an ageing workforce and an increasing demand for healthcare due to demographic change¹, an existing shortage of nurses, an increase of noncommunicable diseases (NCDs)² and occupational stress in the profession³). As workloads become more substantial and the number of nurses per patient diminishes, patients and healthcare workers across the globe are put increasingly at risk.

Currently, an increasing number of researchers are investigating nurse-to-patient ratios and their effects and implications, as well as developing proposals on how to optimise the nurse-to-patient ratio. For example, Aiken et al. determined the association of nurse-to-patient ratio to increased morbidity and mortality of patients.

A workload of eight patients versus four was associated with a 31% increase in mortality. Another important finding is, that "[...] the impact of nurse staffing is contingent upon the quality of the nurse environment, and vice versa."⁴ In addition, skill mix, RN turnover and temporary RN staffing should all be considered.⁵

In conclusion, there is scientific evidence of the association between lower nursing workloads and better patient outcomes.

Causes and Consequences

Bae et al. report a relation between nurse staffing and RN skill mix to quality of patient care. Higher nurse staffing levels resulted in reduced numbers of urinary tract infections, pneumonia, upper gastrointestinal bleeding and shock in medical patients and lower rates of "failure to rescue" and urinary tract infections in major surgery patients. Also low registered nurse (RN) staffing levels and poor organisational climates have been found to put nurses at greater risk of needle stick injuries. Furthermore the level of nurse staffing may predict the number of patient falls.⁶

The setting of a nurse-to-patient ratio contains positive and negative consequences.

Positive consequences	Negative consequences
<ul style="list-style-type: none"> • Safer environments for patients and nurses. • Incentives for nurses to return to work at the bedside. • Furthering the collection of nursing relevant data in the healthcare system. • Fostering discussion on the subject, showing the complexity of the issue of safe and adequate staffing levels. 	<ul style="list-style-type: none"> • Tendency to become the norm for nurse-to-patient ratios. • Ratios don't reflect the level of expertise an experienced nurse has obtained. • Data collection and comprehensive workload measurement tools are not available or not applied in many settings.

Prevention and Protection

Before introducing minimum nurse-to-patient ratios the following questions need to be answered:

- How will the implementation of the minimum nurse-to-patient ratio be ensured?
- What will happen if hospitals cannot recruit the necessary numbers of nurses?

To assist in addressing these questions the following matrix may help guide decision-making.

Matrix for Staffing Decision-Making*	
Items	Elements/Definitions
Patients	Patient characteristics and number of patients for whom care is being provided
Intensity of unit and care	Individual patient intensity; across the unit intensity; variability of care; admissions, discharges and transfers; volume
Context	Geographic dispersion of patients, size and layout of individual patient rooms, technology (beepers, computers)
Expertise	Learning curve for individuals and groups of nurses; staff consistency, continuity and cohesion; control of practice; professional expectations; preparation and experience, access to continuing education

*Shortened version from Table I in: Principles for Nurse Staffing, 1999, retrieved 15 Aug. 03.

The process depends on valid and up-to-date data in order to set nurse-patient ratios and ensure that they are adapted to changing patient and system needs.

With the introduction or re-introduction of nurse-to-patient ratios several issues need to be systematically monitored and researched:

- Impact on patient outcomes and on nurse retention/recruitment
- Short and long-term financial effects in relation to patient outcomes
- Development of further knowledge on patient safety, nurses' workload and skill mix
- Improvement of patient outcomes and development of standardized, accessible and timely data on nurse-to-patient ratio and staffing
- Adaptation of basic and continuing nursing education to the changed work environment
- Integration of nursing data into healthcare statistic on a local, national and international level

Examples:

Recently, action has been taken in a few countries to set mandatory upwardly adjustable minimum nurse-to-patient ratios or to develop policies and laws to implement mandatory nurse-to-patient ratios to:

- Ensure safe and quality patient care
- Recruit and retain nurses by the bedside

However, you will see from the examples that an increasing number of countries are legislating for the introduction of nurse-to-patient ratios and that there is considerable variation in the actual ratios even when terms such as medical or surgical ward are used.

North America: USA

In 1999, the Assembly Bill 394 passed in California and constituted the first legislation to establish minimum staffing levels for RNs. The following ratios were implemented in January 2004:

Type of unit	Nurse-to-patient ratio
Intensive/Critical Care	1:2
Operating Room	1:1
Labor and Delivery	1:2
Pediatrics	1:4
Emergency Room	1:4
Medical/Surgical	1:5
Psychiatric	1:6

Table 1: Mandatory minimum nurse-to-patient ratios California, USA⁷

Asia: Republic of Korea

In 2012, a bill regarding mandatory patient-to-nurse ratios was introduced to the Korean legislature. The government is piloting a nurse to patient ratio of 1:13 under a new act however nurses report often being assigned 18-20 patients. These ratios pertain to RNs, nursing assistants, technicians and other healthcare workers.⁸

Australia

In 2001, Victoria implemented mandatory minimum nurse-to-patient ratios in all public sector facilities. The minimum ratios vary to meet the needs of different units and shifts. Healthcare institutions are categorized into different levels according to acuity of care, size and location.

On medical and surgical units mandatory nurse-to-patient ratios exist from 1:4 to 1:6 with more patients permitted in night shifts. On emergency wards, the ratio 1:3 is mandatory at all times; triage nurses are excluded. Results of the implementation were: improved recruitment and retention of nurses, reduced reliance on agency staff, improved patient care, increased job satisfaction and reduced stress.

In addition, in 2010, New South Wales implemented mandatory nurse-to-patient ratios in surgical/medical wards, palliative care and acute mental health units.

Europe: United Kingdom

In 2011, The Royal College of Nurses (RCN) decided to pursue mandatory nurse-to-patient-ratios. After publications and campaigns to the public, the RCN were able to bring the issue to the House of Lords. But as of January 2015, no decision has been made regarding a minimum nurse-to-patient ratio.

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The **International Council of Nurses (ICN)** is a federation of more than 130 national nurses associations representing the millions of nurses worldwide. Operated by nurses and leading nursing internationally, ICN works to ensure quality nursing care for all and sound health policies globally.

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