

# The Patient Safety Competency Framework for Nursing Students

## Authors

The project to develop the Patient Safety Competency Framework (PSCF) was conducted in 2017 and led by Professor Tracy Levett-Jones (University of Technology Sydney), Associate Professor Trudy Dwyer and Professor Kerry Reid-Searl (CQUniversity). The project team members included: Dr Stephen Guinea (Australian Catholic University), Associate Professor Patrea Andersen (University of the Sunshine Coast), Ms Leeanne Heaton, Ms Tracy Flenady and Dr Judith Applegarth (CQUniversity).

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For enquiries about the Patient Safety Competency Framework, please contact Professor Tracy Levett-Jones, Tracy.Levett-Jones@uts.edu.au

## The Delphi Project

**Aims:** The aims of the Delphi project was to (a) seek consensus on the key patient safety competency statements, knowledge and skill sets relevant to undergraduate nursing programs and essential to patient safety; and (b) to create a Patient Safety Competency Framework for nursing students.

**Participants:** An expert panel consisting of 32 academics representing nursing programs from across Australia and nine content experts participated in the study.

**Method:** Data collection and analysis for the three round modified online Delphi project was undertaken in 2016-2017.

**Round 1** of the study explored the extent to which the concepts of patient safety are currently integrated into undergraduate nursing curricula in Australia, and consensus was sought on the key patient safety competency statements relevant to undergraduate nursing programs. Following Round 1 seven competency statements were agreed upon; they targeted the following patient safety areas:

- Person-centred care
- Therapeutic communication
- Cultural competence
- Teamwork and collaborative practice
- Clinical reasoning
- Evidenced-based practice
- Preventing, minimising and responding to adverse events

**Round 2** of the study sought consensus on the knowledge and skill sets that illustrate each of the competency statements. Expert panel members were asked to review the entire document and content experts were asked to provide feedback on specific areas aligned with their expertise. Following Round 2 two additional competency statements were added, infection prevention and control, and medication safety.

**Round 3** elicited expert panel members' final comments on the accuracy, relevance, clarity, and redundancy of the revised knowledge and skill statements and sought feedback on the PSCF as a whole. Following Round 3 the PSCF was amended and the final version is provided on the following pages.

## Abstract

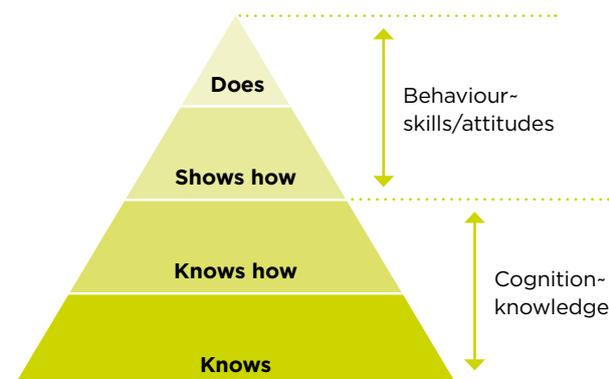
Competency denotes an expected standard of performance that reflects what a person knows and is able to do in a particular circumstance [1]. The knowledge and skills nursing students develop during their undergraduate studies have a direct impact on patient safety [2]. However, in Australia, the absence of a clearly articulated set of patient safety<sup>1</sup> competency statements for nursing students has been a challenge to curriculum development, teaching and student assessment. Although the National Safety and Quality Health Service Standards [3] are currently used to inform nursing curricula, their key purpose is not educational but to support clinical governance and risk mitigation in acute care. In addition, while Standard 6 of the Nursing and Midwifery Board of Australia Registered Nurse standards for practice [4] refers to the importance of 'providing safe, appropriate and responsive quality nursing practice', the level of detail required for curriculum development or student assessment is limited. For these reasons a Delphi project was conducted to develop a Patient Safety Competency Framework (PSCF) for nursing students.

## Keywords

Patient safety, competency, nursing student, competency framework, knowledge, skills, Delphi

## The Patient Safety Competency Framework

Competency frameworks constitute a blueprint for optimal performance in a given area of practice [5]; and competency statements refer to the specific outcomes of learning. The knowledge and skill statements included in the PSCF were structured with reference to Miller's [6] pyramid of competence (see Figure 1). In the PSCF knowledge statements are conceptualised as the foundation for competence. To practice safely nursing students must have a requisite level of knowledge. Next, they must know how to apply their knowledge using cognitive skills such as analysis, interpretation and evaluation. The third level of the pyramid refers to skills and behaviours, in particular showing how or demonstration of skills (for example in a simulated setting); and the fourth level refers to what the learner does with their knowledge and skills in a real-life clinical setting.



**Figure 1:** Miller's pyramid of competence

1. For the purpose of this project patient safety was defined as 'the prevention of errors and adverse effects to patients associated with healthcare' (Patient Safety: Making health care safer. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA3.0 IGO).

# 1 Person-centred care<sup>2</sup>



On completion of their nursing degree graduates will be able to demonstrate the ability to plan and provide care that is respectful of the person's individual needs, values and life experiences.

## KNOWLEDGE

The nursing student:

1. Discusses the meaning of person-centred care
2. Describes how person-centred care impacts patient safety and wellbeing
3. Outlines interpersonal skills that are consistent with a person-centred approach
4. Describes strategies that can be used to support people to take responsibility for their own health and wellbeing
5. Describes when it is or is not appropriate to advocate for people

**Person-centred care** is the central tenet underpinning the delivery of safe and effective nursing care. It is a holistic approach that is grounded in a philosophy of personhood [7]. Person-centred care means treating each person as an individual, protecting their dignity, respecting their rights and preferences, and developing a therapeutic relationship that is built on mutual trust and understanding [8].

## SKILLS

The nursing student:

1. Demonstrates an ability to provide holistic care that takes into account the person's current situation, previous experiences and life history
2. Works in partnership with the person by including them in decisions and plans related to their healthcare
3. Considers the person's rights, preferences, needs and values when planning and providing care
4. Supports the person to make informed choices about their healthcare
5. Provides care with the person's informed consent
6. Demonstrates empathy by seeking to understand the person's perspectives, views and feelings
7. Demonstrates respect by maintaining the person's dignity and privacy
8. Advocates for people, if required, to ensure that their values, needs and preferences are upheld

2. The term 'person' in this context refers to the patient, their family and/or significant others. In the case of a child, person-centred care also denotes family-centred care.

# 2 Therapeutic communication



On completion of their nursing degree graduates will be able to demonstrate the ability to use verbal and non-verbal communication skills to convey respect and empathy, and to encourage the person to express their feelings and needs, while at the same time maintaining professional boundaries.

## KNOWLEDGE

The nursing student:

1. Discusses the meaning and principles of therapeutic communication
2. Describes the relationship between therapeutic communication and patient safety
3. Outlines interpersonal and environmental factors that can interfere with therapeutic communication
4. Discusses the importance of maintaining professional boundaries
5. Describes strategies to evaluate and improve people's health literacy
6. Outlines the principles of effective patient education

**Therapeutic communication** occurs when nurses use verbal and nonverbal communication techniques in a goal-directed way and ensuring that the healthcare needs of the person remain the central focus. Therapeutic communication is built on trust, authenticity, empathy and self-awareness. Nurses who communicate therapeutically listen to understand, maintain a non-judgmental stance, and are 'fully present' with the person [9].

## SKILLS

The nursing student:

1. Demonstrates the ability to develop therapeutic relationships while maintaining professional boundaries
2. Uses verbal and nonverbal communication techniques effectively
3. Asks the person for their understanding of the situation, issue, or problem
4. Responds to person's requests and concerns courteously, kindly and in a timely manner
5. Shares information with the person in a way that is understandable and that encourages participation in decision-making
6. Communicates in a way that is appropriate to the person's level of health literacy while avoiding jargon and complex terms
7. Provides education that is appropriate and meets the needs of the person and their family/carer
8. Ensures privacy and confidentiality when communicating with and about patients
9. Ensures relevant family/significant others are included in discussions about healthcare decision-making (as appropriate)

# 3 Cultural Competence



On completion of their nursing degree graduates will be able to demonstrate respect for each person's cultural values, beliefs, life experiences and health practices.

## KNOWLEDGE

The nursing student:

1. Defines the terms culture, cultural awareness, cultural humility, cultural competence and cultural safety
2. Discusses the history and principles of cultural safety
3. Discusses the relationship between cultural competence and patient safety
4. Discusses when and how interpreting and translation services should be used
5. Describes how to work collaboratively with an Cultural Liaison Officer<sup>3</sup>
6. Discusses how the life experiences of migrants and refugees can impact their health and wellbeing
7. Discusses how colonisation and racism has impacted the health and wellbeing of Aboriginal and Torres Strait Islander Peoples
8. Articulates personal views about caring for people from different cultural backgrounds
9. Openly discusses own cultural values, attitudes, biases and preconceptions

## SKILLS

The nursing student:

1. Demonstrates the ability to conduct a cultural assessment
2. Demonstrates cultural empathy by seeking to understand the person's cultural and spiritual values, needs, practices and perspectives
3. Adapts practice to accommodate the person's cultural needs and values (where appropriate)
4. Avoids generalisations and stereotypes when discussing people from different cultural groups
5. Demonstrates how to access an interpreter (if required)
6. Demonstrates how to access an appropriate Cultural Liaison Officer /community support representative (if required)
7. Seeks to understand whether the person feels culturally safe

**Cultural competence** is integral to safe and effective clinical practice. The term cultural competence refers to behaviours and attitudes that enable systems, organisations, professions and individuals to work effectively in cross-cultural situations [10]. While cultural safety focuses on the experiences of the person requiring healthcare, cultural competence refers to the willingness to adapt practice to meet the needs of people from diverse cultures, and the ability to interact with persons from cultures and/or belief systems different to one's own [11, 12] .

3. Cultural Liaison Officer in this context refers to Aboriginal and Torres Strait Islander Liaison Officers and Refugee and Migrant Health Officers etc

# 4 Teamwork and collaborative practice



On completion of their nursing degree graduates will be able to collaborate and communicate effectively with members of the healthcare team in ways that facilitate mutual respect and shared decision-making.

## KNOWLEDGE

The nursing student:

1. Describes the characteristics of effective healthcare teams
2. Discusses how effective intraprofessional and interprofessional communication and collaboration can improve patient safety
3. Outlines differences in the scope of practice, roles and responsibility of different members of the nursing profession
4. Describes the roles and responsibilities of other healthcare professionals
5. Discusses the impact of effective leadership and followership on team dynamics
6. Discusses own strengths and limitations as a team member
7. Discusses the influence of hierarchy and power differentials on assertive communication

**Teamwork and collaborative practice** refers to healthcare professionals working together using complementary knowledge and skills to provide patient care, based on trust, respect and understanding of each other's expertise [13]. Collaborative practice prioritises the patient's needs, requires well developed intra and interprofessional communication skills and the ability to speak up if one has concerns [14].

## SKILLS

The nursing student:

1. Recognises that the patient and their significant others are integral members of the healthcare team
2. Works in partnership with other healthcare professionals towards common goals that prioritise the patient's perspectives, values and needs
3. Communicates and collaborates confidently and respectfully with all members of the healthcare team
4. Seeks and values the perspectives of all team members
5. Engages in collaborative goal setting and decision-making when planning person-centred care
6. Provides clear and accurate handover reports to members of the healthcare team
7. Communicates effectively using ISBAR (or other appropriate communication tool)
8. Documents clearly, accurately and contemporaneously in patient records
9. Uses only recognised terms and abbreviations when communicating
10. Raises concerns about patient care in a timely manner and with clarity and confidence
11. Manages conflict effectively and, when required, escalates concerns using graded assertiveness
12. Responds to all forms of overt and covert horizontal or vertical violence using appropriate strategies and reporting processes

# 5 Clinical Reasoning



On completion of their nursing degree graduates will be able to accurately assess, interpret and respond to individual patient data in a systematic and timely way.

## KNOWLEDGE

The nursing student:

1. Discusses the relationship between patient safety and clinical reasoning
2. Identifies examples of assessment frameworks that can be used to systematically collect patient data and inform clinical reasoning
3. Differentiates between normal and abnormal vital signs and other critical patient data
4. Outlines the pathophysiology underpinning abnormal patient data
5. Discusses the impact of situational awareness on clinical reasoning and patient safety
6. Discusses the importance of lifelong learning to safe and effective clinical reasoning
7. Reflects on and discusses how cognitive biases can influence clinical reasoning

**Clinical reasoning** is a cyclical process by which nurses collect cues, interpret the information, come to an understanding of a patient problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process [15]. Clinical reasoning requires a critical thinking disposition and is influenced by the nurse's assumptions, attitudes and cognitive biases [16].

## SKILLS

The nursing student:

1. Uses a systematic and logical process for clinical reasoning
2. Conducts a comprehensive and focused nursing assessment using appropriate frameworks and techniques
3. Refers to a range of patient data including handover reports, medical records, the person's social and medical history and evidence-based guidelines
4. Elicits the person's concerns and understanding of the situation
5. Differentiates between normal and abnormal vital signs and other critical patient data
6. Analyses, synthesises and interprets assessment data accurately and systematically
7. Notices deviations from normal and subtle changes in a patient's condition that signal the need for further investigation, immediate clinical review or rapid response
8. Uses early warning charts and systems appropriately
9. Anticipates, recognises and responds appropriately to clinical deterioration
10. Matches the features of the person's presentation with other similar or previous patient encounters
11. Identifies priority patient problems based on accurate and complete interpretation of available patient data
12. Plans and implements nursing care both autonomously and in consultation with other members of the healthcare team
13. Evaluates progress towards expected outcomes by re-assessing the person's condition
14. Critically reflects on and learns from previous experiences to improve clinical reasoning skills

# 6 Evidenced-based practice



On completion of their nursing degree graduates will be able to provide care that takes into account best available evidence, clinical expertise and patient's individual needs, values and preferences.

## KNOWLEDGE

The nursing student:

1. Describes different sources of evidence (e.g. empirical studies, clinical expertise, patient values and preferences)
2. Outlines and discriminates between different levels of evidence
3. Describes different approaches used to collect and collate data to inform evidenced-based practice
4. Explains the terms validity, reliability, trustworthiness and credibility in reference to healthcare studies
5. Explains how evidence-based practice influences the choice of interventions in the provision of effective patient care
6. Describes personal strategies used to access nursing evidence to inform and improve patient care

## SKILLS

The nursing student:

1. Plans and provides healthcare based on the best available evidence
2. Accesses, appraises and critiques multiple sources of evidence
3. Uses information and communication technologies to access valid sources of evidence
4. Considers clinical expertise as a valuable source of evidence
5. Includes patient's values and preferences as valid sources of evidences
6. Provides rationales for patient care that are informed by the best available evidence
7. Demonstrates ethical standards in the collection, interpretation and use of data

**Evidence-based practice** is the conscientious and explicit use of current best evidence, clinical expertise and patient values to make decisions about patient care [17]. Evidence-based practice requires the ability to search for, critically appraise, utilise and translate research into practice. This includes the integration of contemporary research, into the decision making process to support safe patient care.

# 7 Preventing, minimising and responding to adverse events



On completion of their nursing degree graduates will be able to anticipate and respond to human and systems factors that have the potential to jeopardise patient safety, and take appropriate actions to prevent reoccurrence of errors and near misses.

## KNOWLEDGE

The nursing student:

1. Defines the terms error, adverse event, near miss and violation
2. Describes human and system factors that lead to potential high risk clinical situations and errors in healthcare
3. Discusses professional factors (e.g. staffing levels, skill mix, training opportunities, workload, leadership styles etc) that impact on patient safety
4. Discusses environmental factors (e.g. lighting, noise, clutter etc) that impact on patient safety
5. Discusses personal factors (e.g. fatigue, stress, substance use) that impact on patient safety
6. Discusses factors that contribute to a culture of workplace safety (e.g. open communication, teamwork, and error reporting systems)
7. Identifies how vulnerable individuals and groups are at increased risk of adverse outcomes and discusses preventive strategies
8. Analyses the benefits and limitations of technologies designed to reduce risk (e.g. barcodes, infusion pumps)
9. Discusses strategies to minimise the risk of injury to self and others (e.g. safe patient moving and use of PPE)
10. Describes the importance and process of continuous quality improvement as a strategy to improve patient safety
11. Discusses strategies for self-care and to enhance resilience and coping skills
12. Describes the process for reporting errors and near misses
13. Describes the process and purpose of open disclosure
14. Describes how healthcare professionals can learn from errors and near misses
15. Acknowledges, takes responsibility, reflects on and learns from own mistakes

**Preventing and minimising adverse events** refers to the ability to anticipate risks to patient safety and to effectively manage human and systems factors that have the potential to impact patient safety [18]. **Responding appropriately to adverse events** encompasses the ability to recognise and manage patient deterioration, to participate in analysis of the events in order to identify system failures and appropriate solution, and to provide honest and timely communication about the facts of the adverse event [19].

## SKILLS

The nursing student:

1. Uses appropriate patient identifiers and seeks consent prior to initiating care
2. Practices within legal and ethical frameworks, relevant guidelines, policies and evidence-based resources in relation to patient safety
3. Conducts regular and appropriate risk assessments (e.g. falls, pressure area, cognitive and nutrition etc.)
4. Implements appropriate nursing actions to address identified risks to patient safety or wellbeing
5. Encourages patients and family members to speak up if they identify factors that may compromise safety
6. Responds appropriately to people's concerns and complaints with reference to organisational protocols and within own scope of practice
7. Notices, anticipates and addresses human and system factors that may lead to errors
8. Uses strategies to reduce reliance on memory such as checklists, cue cards, algorithms and mnemonics
9. Uses technologies designed to improve patient safety accurately and effectively
10. Identifies and contributes to the prevention and management of agitation, aggression and violence in the workplace
11. Reports concerns related to hazards, errors and near misses in a timely manner using organisational reporting systems
12. Seeks to understand the cause of an error or near miss rather than attributing blame
13. Maintains own fitness to practice and takes responsibility for personal factors (mental, physical or emotional) that have the potential to negatively impact on patient safety
14. Raises concerns about other's fitness to practice and factors that have the potential to negatively impact on patient safety (e.g. fatigue, stress, substance use) confidentially and using appropriate channels
15. Acknowledges, takes responsibility, reflects on and learns from own mistakes
16. Recognises particular risks associated with vulnerable individuals and groups and initiates actions to prevent adverse outcomes

# 8 Infection prevention and control



On completion of their nursing degree graduates will be able to reduce the risk of patients acquiring healthcare-associated infections and effectively manage infections if they occur.

## KNOWLEDGE

The nursing student:

1. Describes the chain of infection and the different modes of transmission of infection in healthcare
2. Describes how different types of microorganisms spread
3. Explains the terms colonisation, infection and antimicrobial resistance
4. Outlines the principles of standard and transmission-based precautions
5. Identifies people who are at particular risk of healthcare-associated infections (e.g. people who are immunocompromised) and advocates on their behalf when required (e.g. by ensuring hand hygiene practices are maintained)
6. Explains the principles of antimicrobial stewardship
7. Outlines procedures for informing authorities of notifiable diseases

## SKILLS

The nursing student:

1. Educates patients, visitors and colleagues about infection control practices and prevention strategies
2. Demonstrates effective hand hygiene
3. Demonstrates the use of standard and transmission-based precautions for infection prevention and control
4. Demonstrates aseptic and non-touch techniques
5. Uses and removes personal protective equipment in a way that minimises cross contamination
6. Demonstrates correct use and disposal of sharps and waste
7. Cleans or discards used equipment appropriately
8. Manages blood and body fluid spills appropriately
9. Raises concerns about inappropriate antimicrobial use
10. Complies with organisational requirements for immunisation

**Infection prevention and control** refers to the use of effective, evidence-based strategies to prevent and manage healthcare-associated infections. It also focuses on minimising the risk of transmission by effectively using standard and transmission-based precautions and reducing the development of resistant organisms [20, 21].

# 9 Medication safety



On completion of their nursing degree graduates will be able to administer and monitor the therapeutic use of medications; and respond appropriately to medication errors and adverse drug reactions.

## KNOWLEDGE

The nursing student:

1. Outlines key principles of safe medication management
2. Identifies factors that have the potential to compromise safe medication practices
3. Defines and differentiates between a medication error, adverse drug reaction, drug sensitivity, side effect and drug allergy
4. Describes the roles and responsibilities of members of the medication team responsible for prescribing, dispensing and administering medications
5. Outlines legislative and organisational requirements for medication prescription, storage, use and administration
6. Describes how to report medication incidents including adverse drug reactions, medication errors and near misses

**Medication safety** refers to the safe use of medicines to achieve therapeutic outcomes and improve people's quality of life, while minimising risks and responding to errors [22]. Medication safety is dependent upon the healthcare professionals' ability to manage the human and systems factors that have the potential to adversely impact the accuracy of medication prescribing, dispensing and administration, and to educate patients to self-manage medications appropriately [23].

## SKILLS

The nursing student:

1. Demonstrates the ability to take an accurate medication history
2. Identifies previous drug allergies, sensitivities or adverse reactions
3. Uses evidence-based sources of information when administering medications
4. Includes the person as an active member of the medication team
5. Consults with members of the medication team responsible for prescribing and dispensing medications (e.g. medical officers and pharmacists)
6. Takes medication orders via telephone in accord with legislation and organisational policies
7. Complies with legislative and organisational requirements related to safe and appropriate handling, storage administration and disposal of medications (including S4D and S8)
8. Works within own scope of practice with regards to medication administration
9. Uses only recognised and ACSQHC approved abbreviations related to medication administration
10. Administers medications only when a valid medication order is provided
11. Demonstrates safe and accurate medication administration using 6 rights and 3 checks
12. Prevents and manages interruptions while administering medications
13. Takes appropriate precautions with high risk medications such as:
  - Anti-infectives
  - Potassium and other electrolytes
  - Insulin
  - Narcotics and other sedatives
  - Chemotherapeutic agents
  - Heparin and other anticoagulants
14. Accurately documents medication administration and medications that are refused or withheld
15. Provides appropriate patient education about medication use, side-effects, storage and disposal
16. Responds to, reports and documents adverse drug reactions, medication errors and near misses in accordance with legislation and organisational policies

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