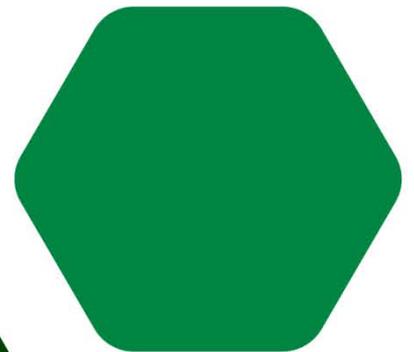
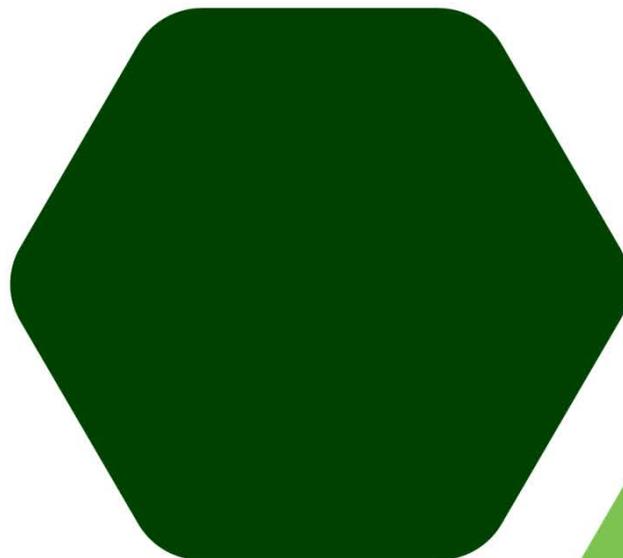


Independent Hospital Pricing Authority

Australian Teaching and Training Classification Version 1.0

User Manual

June 2018



IHPA

Version history

Version	Effective Dates	Change Summary
1.0	June 2018	Final version of ATTC User Manual v1.0

Australian Teaching and Training Classification v1.0 – User Manual, June 2018

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Acronyms

ABF	Activity Based Funding
AHPRA	Australian Health Practitioner Regulation Agency
ATTC	Australian Teaching and Training Classification
COAG	Council of Australian Governments
DRS	Data Request Specification
FTE	Full-Time Equivalent
HTTRA	Hospital Teaching, Training and Research Activities
IHPA	Independent Hospital Pricing Authority
LHN	Local Hospital Network
NBEDS	National Best Endeavours Data Set
NHRA	National Health Reform Agreement
TTR	Teaching, Training and Research

Executive summary

The Independent Hospital Pricing Authority (IHPA) developed the Australian Teaching and Training Classification (ATTC) as a national classification for teaching and training activities which occur in public hospital services. The ATTC aims to provide a nationally consistent approach to how teaching and training activities are classified, counted, and costed. Development of the ATTC involved defining teaching and training for the purposes of Activity Based Funding (ABF), identifying specific cost drivers, conducting a costing study, and undertaking of data modelling to develop the classification.

The ATTC Version 1.0 (v1.0) has been developed as a health professional trainee oriented classification. The key concepts in the ATTC v1.0 include profession and training stage.

1. Introduction

1.1. Independent Hospital Pricing Authority

IHPA is an independent government agency established by the Commonwealth as part of the implementation of the National Health Reform Agreement (NHRA) 2011. Under the NHRA, the Council of Australian Governments unanimously agreed to the establishment of ABF as the primary funding methodology for public hospitals throughout Australia. The aim of a national ABF system is to improve the efficiency and transparency in the delivery and funding of Australian public hospital services.

The NHRA required that IHPA provide advice to the Council of Australian Governments (COAG) Health Council on the feasibility of transitioning funding for teaching, training and research (TTR) to ABF or other appropriate arrangements reflecting the volumes of activities carried out under these functions.

IHPA's overall functions and performance are governed by the Pricing Authority. Members of the Pricing Authority bring significant expertise and skills to the role, including substantial experience and knowledge of the health care needs and the provision of health care services for people living in regional and rural areas.

IHPA has a number of determinative functions as specified by the NHRA. IHPA's primary role is to determine the National Efficient Price and the National Efficient Cost for public hospital services. Other functions IHPA has responsibility for include determining data requirements, and developing and specifying the classifications for services provided by public hospitals. IHPA undertakes reviews and updates of existing classifications and is also responsible for introducing new classifications.

1.2. Classification systems

Classification systems aim to provide the health care sector with a nationally consistent method of classifying patient level activity and other services, and their associated costs in order to provide better management, measurement and funding of high quality and efficient health care services.

Classifications are comprised of end-classes (codes) that provide clinically meaningful ways of relating the types of hospital activities, such as patient care and teaching and training, to the resources required. Classification systems enable hospital and health service provider performance to be measured by creating a link between hospital activities and the resources consumed for undertaking these activities.

Nationally adopted classifications for services provided in public hospital services allow Australian governments to provide funding to public hospitals based on the ABF mechanism. Using a classification system can result in improved management, measurement and funding.

1.3. Current status of funding of teaching and training activities provided in public hospitals in Australia

Teaching and training activities represent an important role of the public hospital system alongside the provision of care to patients. As health professional students and trainees progress through training pathways to achieve qualification and registration (Figure 1), they utilise services provided by the public hospital system. Figure 1 displays a high level view of teaching and training pathways in public health services for each major clinical professional group. It demonstrates the progression through phases of teaching and training from the stages of pre-entry/student and early graduate, through to advanced/vocational trainee.

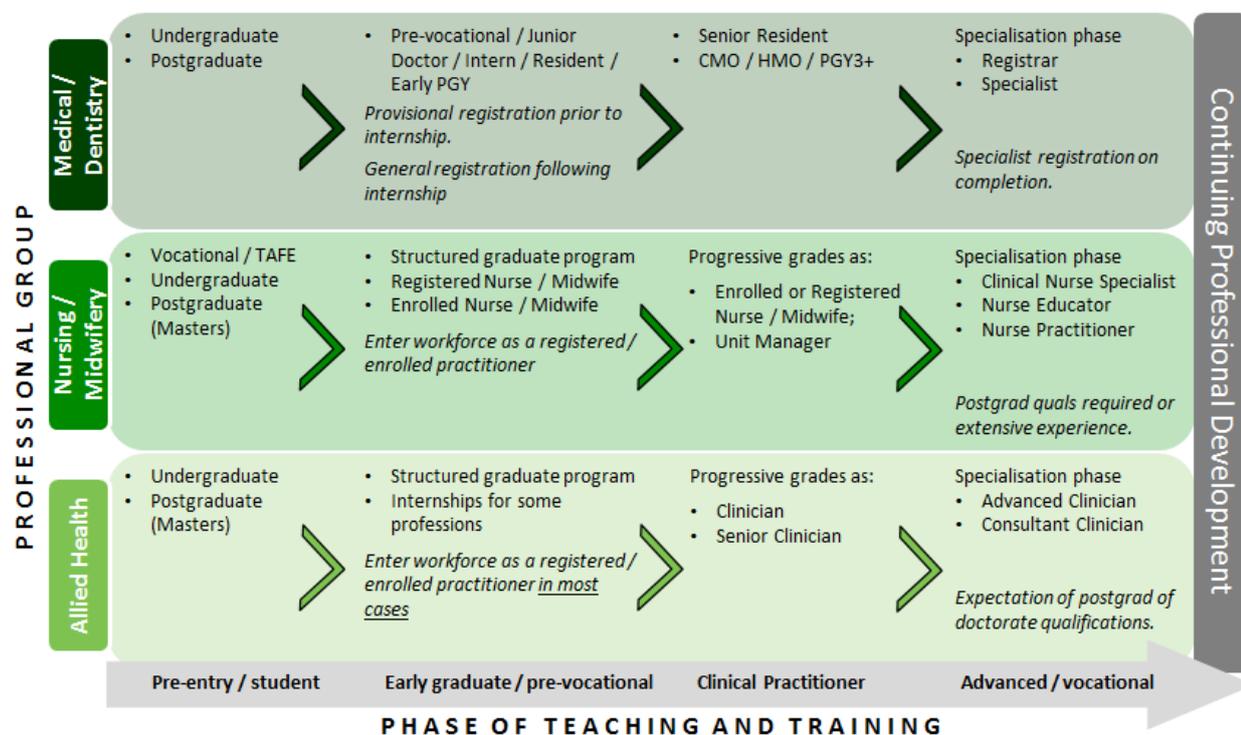


Figure 1. Typical training and teaching pathways for major health professional groups¹

Prior to the development of the ATTC there was no classification system for teaching and training, nor were there mature, nationally consistent data collections for activity or cost data which would allow IHPA to price teaching and training using ABF methods.

Teaching, training and research activities are currently block funded. There is little visibility as to the teaching and training activity provided and where block funding or grants are allocated at a state and territory or Local Hospital Network (LHN) level. The development of the ATTC will enable such activities to be priced on an ABF basis in the future in order to increase the transparency of funding flows from governments to hospitals.

¹ Paxton Partners. (2016). *Teaching, training and research costing study: Final report*. Retrieved 7 June 2018 from <https://www.ihsa.gov.au/publications/teaching-training-and-research-costing-study-final-report-july-2016>

In December 2014, IHPA provided advice to the COAG Health Council that it is feasible to transition funding for teaching and training activities from block funding and grants to ABF arrangements. Subsequently, IHPA has undertaken a significant program of work to inform the development of the first iteration of the ATTC.

1.4. Benefits of the ATTC

The development of the ATTC is in the interests of all Australian governments, public hospitals and ultimately the professionals delivering and receiving teaching and training. A relevant and current classification system for teaching and training will assist health services in a number of ways, including to:

- Assist with the administrative management of teaching and training in hospitals and health care services
- Enable quality improvement initiatives, such as benchmarking and performance measurement across similar services
- Improve statistical reporting
- Provide the health care sector with a nationally consistent method of classifying teaching and training activities and costs to ensure transparent and efficient funding of these activities.

1.5. Companion documents

This document should be read with the following companion documents:

- [Hospital Teaching, Training and Research Activities National Best Endeavours Data Set 2018-19](#)
- [Hospital Teaching, Training and Research Activities National Best Endeavours Data Set 2018-19 Technical Specifications for reporting](#)

2. IHPA's approach to developing the ATTC

2.1. Definition of teaching and training

In June 2013, IHPA undertook the *Define teaching, training and research and identify associated cost drivers for ABF purposes* project² (Definitions and Cost Drivers project) to develop a definition of teaching and training for the purposes of ABF, and to identify the cost drivers associated with teaching and training.

The following definition of teaching and training³ for ABF purposes was approved by the Pricing Authority in February 2014:

“The activities provided by or on behalf of a public health service to facilitate the acquisition of knowledge, or development of skills. These activities must be required for an individual to:

- *attain the necessary qualifications or recognised professional body registration to practice;*
- *acquire sufficient clinical competence upon entering the workforce; or*
- *undertake specialist/advanced practice.*

in Medicine, Dentistry, Nursing, Midwifery or Allied Health.”

2.2. Identification of cost drivers

The Definitions and Cost Drivers project identified a range of potential cost drivers for further examination in the teaching and training classification development. The project involved a number of stages, including:

- Comprehensive literature review
- Wide ranging stakeholder consultation
- Quantitative analysis using data obtained from Queensland, Western Australia and South Australia.

² Paxton Partners. (2014). *Define teaching, training and research and identify associated cost drivers for ABF purposes: Final project report*. Retrieved 19 July 2017 from <https://www.ihipa.gov.au/publications/teaching-training-and-research-definitions-and-cost-drivers-project>

³ Australian Institute of Health and Welfare. (2017). *Hospital teaching, training and research activities national best endeavours data set 2018-19* (HTTRA NBEDS). Retrieved 19 July 2017 from <http://meteor.aihw.gov.au/content/index.phtml/itemId/677455>

The project identified potential cost drivers as falling into the following categories:

- The volume and mix of trainees
- Teaching and training requirements of different registration bodies and colleges.

The project also defined key teaching and training activities such as direct, indirect, embedded and overhead activities and costs, providing the scope for the TTR Costing Study.

The different types of teaching and training related activities are as follows:

- **Direct activities:** Distinct and separable activities which occur outside of an episode of care but are directed towards skills and knowledge development. In the teaching and training context, direct activities include, for example, lectures, tutorials and workshops.
- **Indirect activities:** Administrative and coordination activities undertaken by a health service that are essential to facilitate teaching and training. These 'back office' activities may include utilities, maintenance, the coordination of student placements, rotations, educational program development or negotiation with higher education providers.
- **Embedded activities:** Where teaching and training occurs in conjunction with patient care, including activities such as ward rounds, training during surgical interventions or refinement of other procedural skills such as cannulisation or catheterisation.
- **Overheads:** A hospital's corporate overhead costs (e.g. finance department and payroll services).

A key recommendation of the Definitions and Cost Drivers project was that the scope of a future classification for teaching and training should be defined by two primary criteria:

1. The professional group in which a trainee is employed (or placed)
2. The phase of teaching and training in which the individual is engaged.

2.3. Teaching, training and research costing study

In 2015, IHPA conducted a TTR cost and activity data collection (the TTR Costing Study)⁴ at a representative sample of Australian hospitals, in order to develop a costed data file to inform the development of a TTR classification. All jurisdictions in Australia were invited to participate in the study and 19 hospitals in three jurisdictions across Australia participated; Queensland (13 sites), Western Australia (5 sites), and South Australia (one site). The TTR Costing Study included a six-month prospective data collection period from May to October 2015. Additionally, the TTR Costing Study collected retrospective teaching, training and research data from January to April 2015 where available.

⁴ Paxton Partners. (2016). *Teaching, training and research costing study: Final report*. Retrieved 19 July 2017 from <https://www.ihipa.gov.au/publications/teaching-training-and-research-costing-study-final-report-july-2016>

One of the principal outcomes of the TTR Costing Study was that the available data provided an adequate starting point for the development of a teaching and training classification. The limited quantity and quality of research activity and cost data collected in the TTR Costing Study provided a low degree of confidence that the results relating to research capability were adequately representative to define a state and territory funded research classification system.

The final TTR Costing Study data set contained fields that provided information about:

- The hospital and data collection (e.g. site name, geographic region, month of collection)
- The individuals who received training (e.g. their profession, the type of trainee, specialty or medical college)
- The counts and costs of providing training to these individuals (e.g. headcount, full time equivalent [FTE] count, direct and indirect costs, overheads).

The TTR Costing Study endeavoured to provide a rich data set which captured costs related to the various types of teaching and training related activities:

- Direct activities
- Indirect activities
- Embedded activities
- Overheads.

3. Australian Teaching and Training Classification

3.1. Scope of the ATTC

The scope of the ATTC v1.0 is primarily teaching and training activities provided by in-scope public hospital services under the NHRA, including:

- Services delivered by public hospitals
- Services delivered by, or on behalf of, LHNs managed or funded by state and territory health authorities.

Services which are **not** delivered by or on behalf of LHNs, but are managed or funded by other entities within state and territory health authorities, are not included (i.e. it does not necessarily cover all teaching and training within a jurisdiction).

3.2. In-scope teaching and training activities

For the purposes of ABF and the ATTC, in-scope activities include only activities that are required for clinical professionals to either:

- Attain the necessary qualifications or recognised professional body registration to practice
- Acquire sufficient clinical competence upon entering the workforce or
- Undertake specialist or advance practice.

Health professionals whose registration has lapsed and are required to retrain to become eligible to practice are included.

Clinical placements are an in-scope teaching and training activity. A clinical placement⁵ is an activity that contributes to or counts towards clinical/professional education and training requirements for an accredited course. In other words, a clinical placement is an essential requirement that is necessary for successful course completion. As voluntary placements are not essential to the successful completion of a course these are considered to be out-of-scope teaching and training activity for the purposes of ABF.

⁵ Australian Institute of Health and Welfare. (2017). *Clinical placement* (Glossary item). Retrieved 1 May 2018 from <http://meteor.aihw.gov.au/content/index.phtml/itemId/534723>

Clinical placements:

- Occur in a clinical setting (i.e. generally outside the university educational setting, although may occur in university clinics)
- May include a variety of activities (e.g. rotations, observations, selective placements) across all or some years of a particular course, depending upon the accredited course requirements
- Could potentially, in some cases, include a simulated component which meets the curriculum objectives of a clinical placement.

3.3. Out-of-scope teaching and training activities

Whilst public hospital services provide a broad range of teaching and training activities, not all services are considered in-scope for ABF and the ATTC v1.0. Some of the activities which are considered out-of-scope include:

- Orientation / induction
- Mandatory training required for the health service to retain its accreditation
- Training in new skills, technologies or techniques to already qualified health professionals. This may include skills training to support new purchase of diagnostic equipment; education for introducing new drug on formulary; or the introduction of new procedure techniques.
- Continuing professional development. This may include continuing professional development hours, refresher courses, clinical practice competence or conferences.
- Refresher courses for already qualified health professionals. Refresher courses may be provided for individuals who are still registered but require retraining to re-enter the health service workforce. This differs from retaining where the individual's registration has lapsed.
- Clinician training that is not part of a prerequisite qualification or registration requirement. This includes unaccredited positions which are not under a formalised training program.
- Voluntary placements which do not form part of the essential clinical placement requirements for the successful completion of the course.

Medical positions such as Hospitalists⁶ (also known as Non-vocational doctors or Career Medical Officers) are employed by a hospital employing entity and are not a trainee with any of the medical specialist colleges. As such, activities they may undertake such as continuing professional development are also out-of-scope of the ATTC v1.0.

⁶ Australian Medical Association. (2017). *Hospitalists and non-vocational doctors - 2008. Revised 2017*. Retrieved on 10 May 2018 from <https://ama.com.au/position-statement/hospitalists-and-non-vocational-doctors-2008-revised-201>

3.4. Exclusion of embedded costs from the ATTC

A large proportion of the teaching and training delivered to health professionals and students in public hospitals occurs through the delivery of patient care, known as 'embedded' teaching and training. The TTR Costing Study defined embedded costs as:

"Where teaching and training occurs in conjunction with patient care. This includes activities such as ward rounds, training during surgical interventions or refinement of other procedural skills such as cannulisation or catheterisation."

Findings from the TTR Costing Study indicated that based on the data collected during the study, for most professional groups, embedded teaching and training costs represented nearly 80 percent of total teaching and training costs. However, embedded costs were excluded from classification data modelling for the development of the ATTC for the following reasons:

- Embedded teaching and training costs are already priced as part of the other ABF models. Hospitals undertake patient level costing and report all costs associated with patient care in the National Hospital Cost Data Collection. Therefore, teaching and training provided in operating theatres, for example, is currently priced under the admitted acute care ABF model using Australian Refined Diagnosis Related Groups.
- The nature of embedded teaching and training activity means it occurs during the delivery of patient care, resulting in difficulty to delineate embedded teaching and training costs from regular clinical service delivery costs.
- The TTR Costing Study used a clinician survey method to collect embedded teaching and training activity data, which introduced uncertainty regarding the robustness of the data.

As such, the ATTC was developed using only direct and indirect costs. Although the removal of embedded costs from the development of the ATTC excludes a significant proportion of teaching and training costs, the development of a classification structure requires the identification of splitting variables for teaching and training activities with distinguishable costs. IHPA does not intend to include embedded costs in any future revisions of the ATTC.

3.5. Structure of the ATTC v1.0

The structure of the ATTC v1.0 has been based on the detailed findings from the TTR Costing Study and extensive stakeholder consultation. The TTR Costing Study compared the relative costs to conduct teaching and training across both the professional group (e.g. allied health, medicine, etc), and stage of training (e.g. student, new graduate or postgraduate trainee). Unlike the other patient service categories that are currently funded through ABF where activity is a patient episode of care, the ATTC 'activity unit' is a trainee, which is measured through FTE.

The ATTC consists of the following two-levels:

Level 1 – Profession

The first level classifies a trainee into one of five professions:

- Allied health
- Dentistry
- Medicine
- Midwifery
- Nursing.

Level 2 – Training stage

The second level classifies each trainee into one of three training stages:

- Student / pre-entry trainee
- New graduate
- Postgraduate / vocational student.

Figure 2 below describes the ATTC schematic hierarchy.

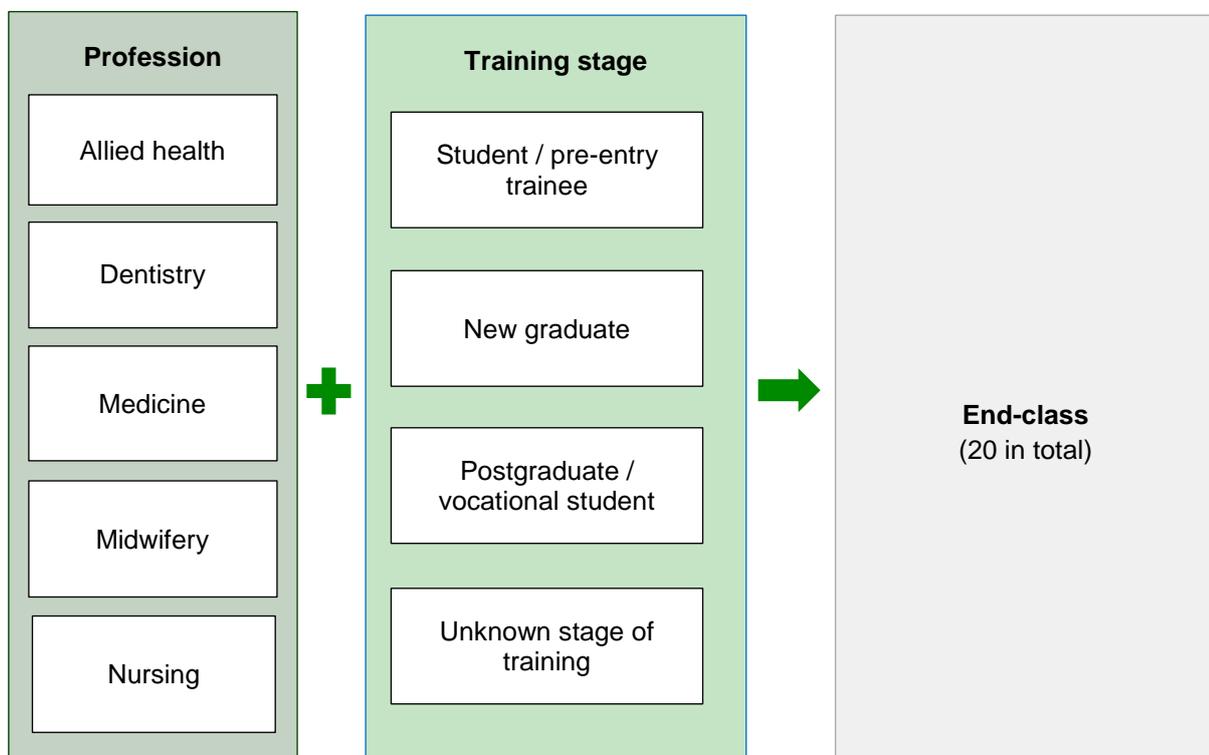


Figure 2. Diagram of structure of the ATTC v1.0

For the purposes of ATTC v1.0, all specialties have been grouped together for simplicity. In keeping with the principles of classification development, the ATTC v1.0 will involve a clinically meaningful yet administratively feasible number of end-classes through the grouping of specialties and disciplines, where appropriate. The ATTC v1.0 will be refined as more data that assembles specialties and disciplines into clinically relevant cost groups becomes available.

The end-classes in the ATTC v1.0 are listed in Table 1.

ATTC end-class	Profession	Training stage
A1-01	Allied health	Student / pre-entry trainee
A2-01	Allied health	New graduate
A3-01	Allied health	Postgraduate / vocational student
A4-01	Allied health	Unknown stage of training
B1-01	Dentistry	Student / pre-entry trainee
B2-01	Dentistry	New graduate
B3-01	Dentistry	Postgraduate / vocational student
B4-01	Dentistry	Unknown stage of training
C1-01	Medicine	Student / pre-entry trainee
C2-01	Medicine	New graduate
C3-01	Medicine	Postgraduate / vocational student
C4-01	Medicine	Unknown stage of training
D1-01	Midwifery	Student / pre-entry trainee
D2-01	Midwifery	New graduate
D3-01	Midwifery	Postgraduate / vocational student
D4-01	Midwifery	Unknown stage of training
E1-01	Nursing	Student / pre-entry trainee
E2-01	Nursing	New graduate
E3-01	Nursing	Postgraduate / vocational student
E4-01	Nursing	Unknown stage of training

Table 1: End-classes in the ATTC v1.0

4. ATTC variables

4.1. Profession

The first level of the ATTC v1.0 identifies the overarching profession of the specific field of health care, which is the primary focus of the training in which a health professional trainee is enrolled. Each trainee is classified into one of five professions.

Definitions for each profession have been adapted from the Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2.⁷

4.1.1. Allied health

Allied health professionals assess, diagnose and treat illnesses and disabilities, and provide therapeutic services. Additionally, they may conduct diagnostic tests or operate equipment to assess illnesses, incapacities and disabilities, provide health advice and develop programs and policies which promote good health, safe and healthy working environments, and administer pharmaceuticals.

These occupations have a level of skill commensurate with a bachelor degree or higher qualification.

Some of these occupations are required to be registered or licenced and this is managed through the Australian Health Practitioner Regulation Agency (AHPRA).

Tasks undertaken by an allied health professional include:

- Questioning, examining, observing and testing patients to identify and determine nature of disease, disorder, illness or problem
- Recording patients' medical histories such as previous injuries, surgeries, general health and lifestyle
- Designing, developing and implementing treatment plans to address patients' problems
- Developing, implementing, reviewing, examining, testing and raising awareness of diets, menus and nutrition intervention programs, the nature and extent of vision problems, and patients' medicine therapy
- Producing images to assist medical practitioners diagnose patients' illnesses and diseases, and administering radiation treatment
- Consulting with other health professionals and other professionals

⁷ Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2: Sub-major group 25 Health Professionals*. Retrieved 21 November 2017 from <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/149F71E06E882AE3CA257B950013100F?opendocument>

- Providing exercise, dietary, lifestyle and hygiene guidelines and advice, adaptive equipment and correctional aids
- Evaluating and documenting patients' treatment response and progress.

4.1.2. Dentistry

Dental practitioners diagnose and treat dental disease, restore normal oral function using a broad range of treatments, such as surgery and other specialist techniques, and advise on oral health.

These occupations have a level of skill commensurate with a bachelor degree or higher qualification.

Registration or licensing is required, and this is managed through AHPRA.

Tasks undertaken by a dental professional include:

- Diagnosing dental diseases using a range of methods such as radiographs, salivary tests and medical histories
- Providing preventative oral health care such as periodontal treatments, fluoride applications and oral health promotion
- Providing restorative oral care such as implants, complex crown and bridge restorations, and orthodontics, and repairing damaged and decayed teeth
- Providing oral surgical treatments such as biopsy of tissue and prescription of medication
- Performing routine orthodontic treatment
- Restoring oral function with removable and fixed oral prostheses
- Assisting in diagnosing general diseases having oral manifestations such as diabetes
- Educating patients to take care of their mouth and teeth
- Leading a dental team which may comprise dental hygienists, dental therapists, dental assistants and other dental specialists.

4.1.3. Medicine

Medical practitioners diagnose physical and mental illnesses, disorders and injuries, provide medical care to patients, and prescribe and perform medical and surgical treatments to promote and restore good health.

These occupations have a level of skill commensurate with a bachelor degree or masters degree in medicine. This is followed by a minimum of 2 FTE years postgraduate prevocational hospital based training, and at least five FTE years specialist study and training upon entering a vocational training program.

Registration or licencing is required, and this is managed through AHPRA.

Tasks undertaken by a medical professional include:

- Examining patients to establish the nature of their complaints, and performing and ordering tests, X-rays and other diagnostic procedures
- Determining diagnosis based on examination and results of tests
- Selecting and administering appropriate treatments and therapies, and advising patients of further treatment options and preventative and therapeutic measures
- Prescribing, administering, preparing and dispensing medication and prosthetic and corrective devices
- Monitoring patients' progress and response to treatment
- Recording patients' illnesses, treatment given and patients' responses and progress
- Advising on diet, exercise and other measures to prevent and aid treatment of diseases and disorders.

4.1.4. Midwifery

Midwives provide care and advice to women during pregnancy, labour and childbirth, and postnatal care for women and babies in a range of settings such as the home, community, hospitals, clinics and health units.

These occupations have a level of skill commensurate with a bachelor degree or higher qualification.

Registration or licensing is required and this is managed through AHPRA.

Tasks undertaken by a midwifery professional include:

- Providing advice and support during pre-conception, intrapartum, antenatal and postnatal periods in partnership with women
- Providing care and management of pregnancy and birth
- Assessing progress and recognising warning signs of abnormal and potentially abnormal pregnancies requiring referral to an Obstetrician
- Monitoring the condition of women and fetuses during pregnancy and throughout labour
- Conducting health education classes and seminars to promote the health of mothers and babies such as reproductive health, antenatal education, preparation for parenthood and breastfeeding, postnatal care and sexual health
- Providing clinical education to other midwives and manage health service units and sub-units
- Providing advice on nutrition, childcare and family planning.

4.1.5. Nursing

Nursing professionals provide care to physically and mentally ill patients in hospitals, nursing homes, medical centres and the community; provide clinical education to nurses; and manage health service units and sub-units.

These occupations have a level of skill commensurate with a diploma (enrolled nurse) or bachelor degree or higher qualification (registered nurses). In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licencing is required, and this is managed through AHPRA.

Tasks undertaken by a nursing professional include:

- Assisting in examining patients, recording patient's illnesses and treatment given, administering prescribed treatment, monitoring patients' progress and response to treatment, and facilitating lifestyle options and treatment plans in conjunction with patients' families, other carers and the community
- Advising on diet, exercise and other measures related to health promotion and prevention, and disorders
- Safety and quality
- Evaluating nurses' ongoing educational needs and planning relevant syllabus structures
- Directing and controlling the allocation of human and material resources for a health service unit such as recruiting staff, human resource management, preparing budgets and financial management
- Undertaking and promoting nursing and interdisciplinary research projects, and promoting uptake of findings into clinical nursing practice and patient management.

4.2. Training stage

The second level of the ATTC v1.0 identifies the clearly defined phase in the educational pathway of a health professional trainee. Each trainee is classified into one of three training stages, including student / pre-entry trainee, new graduate and postgraduate / vocational student.

Definitions for each training stage have been sourced from the Hospital Teaching, Training and Research Activities National Best Endeavours Data Set (HTTRA NBEDS) 2018-19 *Stage of training* data element.

4.2.1. Student / pre-entry trainee

Health professional students or pre-entry trainees are those who have commenced or are undertaking a course in a higher education facility – including those offering vocational education and training, where the course is required for initial registration for, or qualification to, practice as a health professional in Australia. The course may be at a certificate, diploma, undergraduate, graduate-entry or postgraduate level.

4.2.2. New graduate

Health professional new graduates are those who have graduated from a course and gained a qualification to practice as a health professional in Australia. Health professional new graduates may be in an existing new graduate training program or their first or second year post graduation. A new graduate training program is a formal program run by the public hospital service for trainees that have gained a qualification but have not yet started to practice. They may also be known as 'Transition to Professional Practice' programs. University graduates from medical school and some allied health schools that have graduated and are undertaking postgraduate prevocational training (internship) are considered new graduates.

4.2.3. Postgraduate / vocational student

Health professional postgraduate / vocational students are those who have gained an initial qualification to practice as a health professional in Australia, and are commencing or undertaking postgraduate or vocational training in the health professional field for the purpose of specialising or extending their scope of practice in their qualified health profession.

Health professional postgraduate / vocational students may be employed by an establishment while undertaking clinical / professional education and training requirements for an accredited course.

4.3. Number of end-classes

The final ATTC has 20 end-classes, including five classes with an 'unknown' stage of training. IHPA anticipates that the unknown stage of training will be eliminated over time as reporting improves.

5. Further development of the ATTC

5.1. Implementation of the ATTC

Version 1.0 of the ATTC and its supporting documents will be released to states and territories to implement on a best endeavours basis from 1 July 2018. As with other new classifications, IHPA acknowledges that states and territories will need to develop new or refine existing data management systems, conduct training, and develop local policies and procedures in order to implement the ATTC.

The following materials are required to support implementation of ATTC v1.0 and should be read in conjunction with this document:

- Hospital Teaching, Training and Research Activities Data Request Specification (HTTRA DRS)
- Hospital Teaching, Training and Research Activities National Best Endeavours Data Set (HTTRA NBEDS) 2018-19
- HTTRA NBEDS 2018-19 Technical Specifications.

Although the ATTC contains end-classes relating to profession and training stage only, the scope of the HTTRA NBEDS enables the reporting of additional data items to support the future refinement of the ATTC. IHPA is proposing to continue collection the following data items in the HTTRA NBEDS going forward:

- Year of training – the year of an accredited education course that a trainee is enrolled in (e.g. year one, year two, basic registrar, advanced registrar)
- Area of clinical focus – the specific field of healthcare which is the primary focus of the training in which a trainee is enrolled in (e.g. allied health discipline, medical speciality, nursing specialisation)
- Level of qualifying education certification – the type of academic certification of the registered training program that a trainee is currently enrolled in (e.g. bachelor degree, diploma, postgraduate degree).

The HTTRA DRS and NBEDS specify the activity data items required for collection and have been published on IHPA's website. Appendix 2 demonstrates the flow of information from the HTTRA NBEDS to the ATTC.

5.2. Next steps

Under the NHRA, IHPA has a legislative requirement to continue to develop health service classification systems. In line with these legislative requirements, IHPA is committed to the ongoing development and refinement of the ATTC.

As with other classification systems, development of the ATTC is an iterative process. The initial version of ATTC does not specify all professional specialties, as data to support further classification development will need to be collected over the coming years. IHPA recognises that the teaching and training sector is complex and diverse, and is committed to working with existing committees and advisory groups, public consultation and clinical reviews to develop and refine the ATTC.

Once data systems have matured, and there is the capability to report more granular information, IHPA may consider additional variables to enhance the complexity of the ATTC.

6. Technical aspects of the ATTC Version 1.0

6.1. End-class numbering system

6.1.1. Alpha-numeric class characters

The class format of the ATTC v1.0 reflects the structure of the classification. Specifically, the first two alpha-numeric characters specify each class.

The first (left-most) character specifies the profession as:

- A – allied health
- B – dentistry
- C – medicine
- D – midwifery
- E – nursing.

The second character specifies the stage of training as:

- 1 – student / pre-entry trainee
- 2 – new graduate
- 3 – postgraduate / vocational student
- 4 – unknown stage of training.

6.1.2. Examples of the class numbering system

The following examples illustrate how the class format is interpreted.

B3-01

- B – dentistry
- 3 – postgraduate / vocational student.

D1-01

- D – midwifery
- 1 – student / pre-entry trainee.

Appendix 1

Training Pathways for each major professional group

The information below is taken from the *Define teaching, training and research and identify associated cost drivers for ABF purposes: Final project report*⁸ and the *Define teaching, training and research and identify associated cost drivers for ABF purposes: Environmental Scan*⁹.

Figure 3 below illustrates a high level view of teaching and training pathways in public health services for each major clinical professional group. It should be noted that a 'Clinical Practitioner' phase has been included in Figure 3 for completeness, to describe those employees that are considered fully functional members of the health workforce but are typically not actively engaged in teaching and training activities. For the purpose of this project, however, 'Clinical Practitioner' is not considered as a phase of teaching and training, and is not captured by the definition.

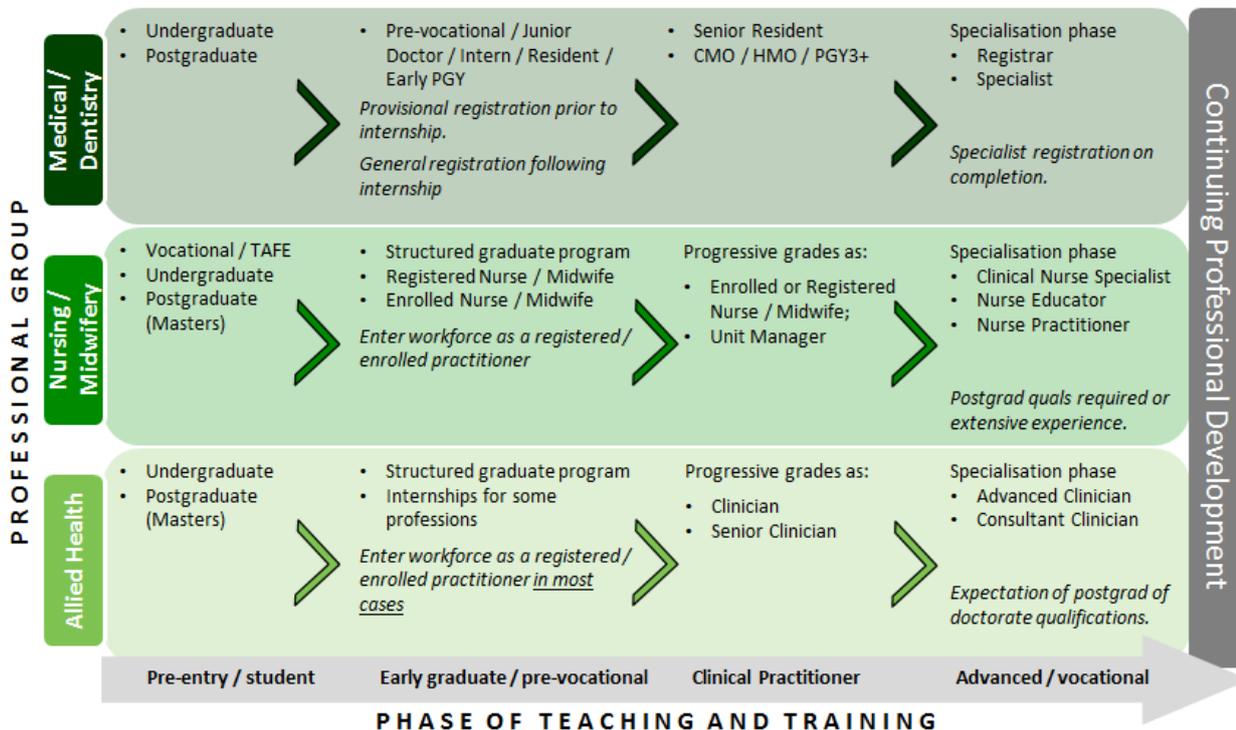


Figure 3. Typical training and teaching pathways for major health professional groups

⁸ Paxton Partners. (2014). *Define teaching, training and research and identify associated cost drivers for ABF purposes: Final project report*. Retrieved on 10 May 2018 from <https://www.ihsa.gov.au/sites/g/files/net4186/f/publications/ttr-final-report.pdf>

⁹ Paxton Partners. (2014). *Define teaching, training and research and identify associated cost drivers for ABF purposes: Environmental Scan*. Retrieved on 10 May 2018 from <https://www.ihsa.gov.au/sites/g/files/net4186/f/publications/ttr-environmental-scan-final.pdf>

Medical profession teaching and training pathway

Pre-entry clinical placement

Medical student trainees typically begin their clinical teaching and training pathway as either undergraduate or postgraduate students and require clinical placement in a health service as an integral part of meeting qualification requirements. Medical students will rotate through a number of different health settings (including community and general practice) and clinical speciality departments of health services.

Although the host higher education providers will typically provide some degree of infrastructure and clinical education staffing support to students, clinical supervision, training and exposure to the clinical environment is largely provided by health services. The type, duration and level of support provided to students will vary according to:

- Individual course curriculum requirements (mix of didactic, experiential and assessment requirements)
- Agreed arrangements and agreements determined between the Higher education provider and the health service and
- Different jurisdictional arrangements in place.

Early entry medical graduates

After graduation from medical school, medical trainees are eligible for provisional registration as a mandatory requirement to enter the medical workforce. Although the terminology tends to differ between jurisdictions, medical trainees enter the workforce as an intern, junior doctor or postgraduate year 1. During this time, medical trainees begin to be exposed to a greater level of clinical responsibility, but are typically supervised closely by more senior clinicians as they are rotated through different departments of the health service. Although interns are not part of a formal course or training program, the Australian Curriculum Framework governs the clinical education requirements of Junior Doctors, which outlines competencies in the areas of clinical management, communication and professionalism.

Pre-vocational years

Upon completing their intern year, medical trainees are eligible for general registration, and may potentially apply for entry into a vocational training program – although further clinical experience is usually required in order to gain admission to these programs. Alternatively, medical trainees may continue to work in a health service as a Resident / Senior Resident / Career Medical Officer / House Medical Officer or other classification if they do not wish to enter vocational training, or while they await admission to a vocational program. As the trainee's experience grows, their clinical responsibility also increases, and the degree of supervision typically decreases. They may also assume a role in the supervision of more junior medical trainees.

Vocational / specialist training pathway

Acceptance to a vocational training program provides registrars with more scope to progressively train in a clinical specialisation, in accordance with medical college training requirements, to obtain fellowship status of the respective college. The college requirements of basic/junior trainees through to advanced trainees differ between colleges as do supervision and training

requirements. In most cases, college training requirements will stipulate the level and amount of supervision, clinical practice and procedural requirements and ratio of consultants per trainees required in the health service to accredit the training position. Due to the nature of advanced training, supervision requirements of the trainee are likely to be higher in the early years of the program, compared to the trainee's latter years as an advanced registrar.

Differences in the nature (procedural / non-procedural), length and other requirements of the respective clinical craft groups can mean that specific teaching and training requirements can vary substantially at this end of the teaching and training continuum. Once the trainee successfully completes the requirements of the vocational training program, they are a fully qualified professional and are eligible for full registration to their chosen professional discipline.

Nursing and midwifery

Pre-entry clinical placement

Although nursing and midwifery trainees' initial entry point to a health service is typically as a student, the timing, curriculum requirement and term for student placement may vary between higher education providers. Higher education provider requirements will influence the type and nature of the health service resources required to support the placement.

Trainees studying to become an Enrolled Nurse may enter to fulfil the requirements of a diploma or advanced diploma level qualification. As part of their training, Enrolled Nurses are required to complete at least 400 hours of clinical placement. Trainees studying to become a Registered Nurse are required to undertake placement to fulfil the requirements of a Bachelor degree in nursing and/or midwifery. Students studying towards a postgraduate nursing or midwifery qualification are also required to undertake placement in a health service.

The nature and duration of clinical supervision can vary substantially in order to fulfil curriculum requirements. As an example, although the minimum clinical placement hours to fulfil the requirements of a Bachelor of Nursing / Midwifery is 800 hours some higher education providers require health services to provide up to 2,000 hours. In contrast to the medical profession, which has varying levels of registration, nurses and midwives are required to be fully registered when they enter the workforce.

Throughout the consultation there was a general acknowledgement that a ratio of up to eight students to one clinical educator (employed by the health service or in some cases by the higher education providers) could be supported within a health service at any one time.

The degree of higher education provider support and subsidy provided by higher education providers to health services to fulfil student placement requirements also differed depending on health service arrangements with higher education providers and in some cases jurisdictional agreements with the higher education sector – in Victoria a standard agreement exists defining the clinical placement fee that can be charged by health services to higher education providers on a per placement day basis.

Early entry nursing and midwifery graduates

Once in the workforce, nurses and midwives may participate in a structured graduate program that is developed and delivered by the health service, although this is not always the case. Graduate nurses and midwives may be mentored or precepted by a more senior professional or in some cases may be expected to be a fully functioning member of the workforce from 'day one' of their employment.

Graduates often rotate through a number of different areas of the health service and may have dedicated orientation / socialisation and education days within each rotation – during which they are essentially supernumerary. Outside of these supernumerary days, graduate nurses are generally considered to be part of the clinical workforce profile, supporting clinical service delivery. Stakeholders acknowledged that there was a gradual 'ramp-up' in graduate nurses clinical service contribution as they gain more clinical experience and confidence. Anecdotally it was recognised that as graduate nurses complete more rotations, there is a noticeable increase in their level of independence and competence.

Career progression

Throughout the course of their career, nurses and midwives may seek to expand their skills base into an advanced or extended scope of practice, to a specialist nurse role (such as theatre or intensive care), into a nurse unit manager role, Nurse Administrator, Nurse Educator or Nurse Practitioner. In some cases, nurses will opt to develop their skills and knowledge of their own volition; in other cases the health service may invite them to do so and/or sponsor the associated costs. The precise teaching and training requirements to achieve these levels of accreditation vary according to the nature of the role, the health service and training provider. Some (such as Nurse Practitioner and many specialist nurse roles) require the completion of formal, clinically-based postgraduate qualification.

Allied health professionals

Allied health teaching and training pathways vary substantially between disciplines. Teaching and training requirements for allied health professionals can vary substantially according to the individual's professional discipline and the training level (e.g. student versus early graduate versus specialist / advanced scope of practice). Nonetheless, there are some common elements across many allied health disciplines, as described below.

Pre-entry clinical placement

Similar to other clinical professionals, the initial entry point to a health service is typically as a student with the timing, curriculum requirement and term for student placement being variable between different disciplines and different higher education provider requirements. The course requirements of various types of higher education providers will influence the type and nature of the health service resources required to support the placement.

In contrast to nursing and midwifery, there was no common relationship between disciplines / courses and the ratio of the number of students that could be supported by clinical education and supervision.

Early entry graduates

Depending on the health service, once in the workforce, allied health professionals (most of whom are already registered to practice when they are employed in a health service) may participate in a structured graduate program developed and delivered by the health service. Graduates may be mentored or precepted by a more senior staff member or in some cases may be expected to be a fully functioning member of the workforce from 'day one' of their employment.

A number of allied health professional bodies require graduates to undertake a period of internship in order to achieve full registration with the professional body. To date, these professions include:

- Pharmacy
- Medical radiation science
- Psychology and
- Dentistry.

Career progression

Allied health professionals may have a number of career pathways depending on the discipline, but broadly, the options to progress proceed as follows:

- Many allied health graduates enter the system as registered professionals (for those disciplines where registration is required), and are largely expected to work to their full scope of practice shortly after entry.
- Some other disciplines (pharmacy, psychology and medical radiation science) undertake an 'internship', which may last for one or two years, depending on the nature of the trainee's qualification. Professionals in these disciplines are expected to work to their full scope of practice shortly after registration with their respective professional group.
- After their graduate year, allied health professionals typically move to a clinician role, where they may fulfil their clinical role in addition to providing supervision and support to new graduates, students and allied health assistants. Individuals progress through grade increments, which denote progressive levels of independent clinical practice depending on competency and years of experience.
- Some individuals may wish to specialise to obtain the role of Senior Clinician, which may typically involve broader management responsibilities.
- After specialisation, allied health professionals are typically expected to undertake postgraduate qualifications in order to attain the role of Advanced Clinician.
- Consultant Clinicians represent the highest level in the allied health hierarchy - Further post graduate study (typically doctorate education followed by additional specialisation) provides advanced or extended scopes of practice.

Appendix 2

TEACHING AND TRAINING DATA FOR THE AUSTRALIAN TEACHING AND TRAINING CLASSIFICATION

INPUTS

OUTPUTS

Hospital Teaching, Training and Research
Activities National Best Endeavours Data Set
(HTTRA NBEDS) 2018-19

Australian Teaching and Training Classification
(ATTC)

Data items used in the ATTC:

- **Area of clinical focus**
(what are they studying now? [e.g. audiology → allied health
thoracic medicine → medicine])
- **Stage of training**
(what level of trainee are they? [e.g. Student /
pre-entry trainee, new graduate, postgraduate /
vocational student])

Additional data items being collected:

- **Principal qualified profession**
(do they have a clinical background prior to
commencing this study? [e.g. allied health,
dentistry, medicine, midwifery, nursing])
- **Level of certificate**
(what qualification are they studying for?
[e.g. certificate, bachelor degree, postgraduate
degree])
- **Year of training**
(what year of course material are they studying?
[e.g. Year 1, year 2, year 3])
- **Full time equivalent/Student placement hours**
(i.e. what is the trainee capacity requirement?)

*Data elements not in ATTC v1.0 will be reviewed for
future consideration within the ATTC.*

Profession

Allied health

Dentistry

Medicine

Midwifery

Nursing

Training stage

Student / pre-entry
trainee

New graduate

Postgraduate /
vocational student

Unknown stage of
training

ATTC end-classes

- A1-01 Allied health – Student/pre-entry trainee
- A2-01 Allied health – New graduate
- A3-01 Allied health – Postgraduate/vocational student
- A4-01 Allied health – Unknown stage of training
- B1-01 Dentistry – Student/pre-entry trainee
- B2-01 Dentistry – New graduate
- B3-01 Dentistry – Postgraduate/vocational student
- B4-01 Dentistry – Unknown stage of training
- C1-01 Medicine – Student/pre-entry trainee
- C2-01 Medicine – New graduate
- C3-01 Medicine – Postgraduate/vocational student
- C4-01 Medicine – Unknown stage of training
- D1-01 Midwifery – Student/pre-entry trainee
- D2-01 Midwifery – New graduate
- D3-01 Midwifery – Postgraduate/vocational student
- D4-01 Midwifery – Unknown stage of training
- E1-01 Nursing – Student/pre-entry trainee
- E2-01 Nursing – New graduate
- E3-01 Nursing – Postgraduate/vocational student
- E4-01 Nursing – Unknown stage of training

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