PAXTON PARTNERS

INDEPENDENT HOSPITAL PRICING AUTHORITY

DEFINE TEACHING, TRAINING AND RESEARCH AND IDENTIFY ASSOCIATED COST DRIVERS FOR ABF PURPOSES

ENVIRONMENTAL SCAN ADDENDUM

November 2013

To be read in conjunction with the Environmental Scan

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1. Introduction

This section describes the background to this Addendum and outlines how the document is structured to present the feedback and outcomes from stakeholder consultation workshops.

1.1. Background

Paxton Partners has been engaged by the Independent Hospital Pricing Authority (IHPA) to *define teaching, training and research (TT&R) and identify associated cost drivers*, *for activity based funding (ABF) purposes* ("the project").

To date, Paxton Partners has:

- ✓ Undertaken an extensive review of the publicly-available literature to understand the current definitions and cost drivers of TT&R at the local, national and international levels;
- ✓ Undertaken consultations with over 350 stakeholders (individually and in group forums) from across the country to inform the development of an Environmental Scan and proposed definitions for TT&R; and
- ✓ Conducted stakeholder consultation workshops in Melbourne (18 October 2013) and Sydney (24 October 2013) to discuss proposed definitions and validate other key findings of the Environmental Scan.

Feedback was provided on a range of matters during the two stakeholder consultation workshops. This Addendum presents a summary of feedback relating to the Environmental Scan and describes how the proposed draft definitions (and the principles used to frame them) have been amended to reflect this feedback.

1.2. Structure of this document

This document:

- Clarifies key issues from stakeholder consultation workshops;
- Presents a summary of feedback received on draft definitions (and underlying principles) at stakeholder consultation workshops;
- Presents changes to the underlying principles and revised draft definitions; and
- Summarises feedback received on trends, issues, developments and cost drivers of TT&R.

Consistent with the approach adopted in the Environmental Scan, this document considers the definition (and underpinning principles) of 'teaching and training' (T&T) separately from 'research'.

2. Clarification of key issues arising at the workshops

Although the focus of the workshops was on the definitions of TT&R, a number of other issues were raised that warrant further clarification in this document.

2.1. Purpose of the definitions and cost drivers project

At the stakeholder consultation workshops, there were a number of queries raised regarding the ultimate intent of the project and how definitions will be used.

As shown in Figure 1, TT&R forms only one of a number of funding streams that flow from the Commonwealth, including both activity based and block funding allocations. TT&R currently sits outside the ABF pool. However, IHPA is required under the *National Health Reform Agreement 2011* (NHRA) to determine whether it is possible and practicable for TT&R funding to be provided on an activity basis.

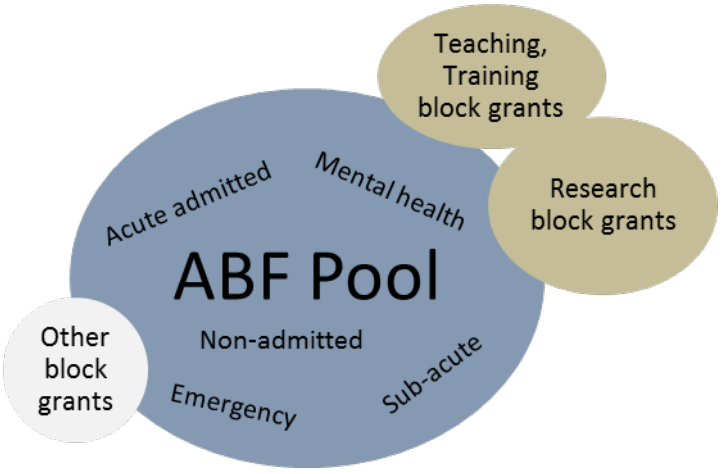
This project is intended to:

- understand the factors and drivers that lead particular health services to incur differential costs with respect to TT&R activities;
- identify a fairer and more efficient method for allocating existing commonwealth funds.

The project is not intended to:

- determine the adequacy of current TT&R funding, nor recommend any increase or adjustment to the size of the current TT&R funding pool;
- evaluate the merit or otherwise of jurisdictional investments or policy decisions – however, these have been investigated to gain a better understanding of TT&R considerations;
- prescribe how TT&R is supported.

Figure 1: Relationship of TT&R funding to other funding sources



2.2. Scope of teaching, training and research

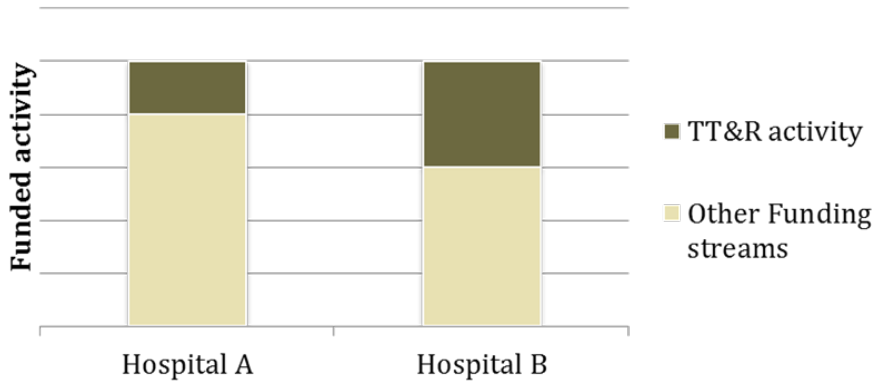
A number of stakeholders requested clarification regarding the scope of the project and the rationale for the Environmental Scan's focus on clinical teaching and training activities, as well as the focus on recurrent (rather than capital) costs.

2.2.1. Focus on clinical teaching and training activities

The end point for this project is the construction of a classification development framework that will provide a means for TT&R activities to be grouped in meaningful ways that explain resource usage. A vast range of activities that occur in public health services may be categorised as teaching, training or research and it will be important that the project delineates those activities that are differential drivers of health service costs.

This general principle is illustrated graphically in Figure 2, which presents the case of two hospitals (A and B) that receive similar funding (across all work streams), but have differing levels of TT&R activity. Hospital B may thus be financially disadvantaged by the level of additional TT&R activities it undertakes compared to Hospital A.

Figure 2: Illustrated example of basis for differential TT&R funding



It is also important to note that all health services deliver a range of teaching and training activities (e.g. fire safety training, occupational health and safety and staff orientation, management and leadership training) which are not funded through existing TT&R block grants, but rather through other funding streams – on the premise that health services must deliver these activities to support their ongoing operations.

Definitions of TT&R for ABF purposes are therefore not intended to capture all activities that may constitute TT&R in a public health service. Instead they are focused on clinical TT&R activities, which are considered to have the most material influence on health service resource requirements and thus best differentiate one hospital from another.

2.2.2. Focus on recurrent costs

Stakeholder consultation workshops also recognised that the delivery of TT&R requires both recurrent and capital resources. Accordingly, some stakeholders expressed uncertainty about whether consideration of the issues surrounding TT&R was confined solely to recurrent resources or whether capital (and hence the contribution of state and territory governments to providing capital infrastructure) should also be considered.

Clause A95 of the NHRA makes this position clear, by stating that "Capital will **not** be explicitly priced by the IHPA…" Consequently, the focus of this project is on how TT&R activity may influence a health service's recurrent costs.

2.3. Approaches for framing the TT&R definitions

Paxton Partners has received considerable feedback on how to frame the definitions of TT&R, and whether they adequately capture the true nature of TT&R activity. This section describes the main, high-level considerations that were raised in response to the proposed draft definitions.

2.3.1. Definitional level

The definitions have deliberately been constructed at a relatively 'high level' to allow sufficient scope for the broad range of activities, professional groups and research bodies that are associated with the delivery of TT&R activities. Some activities that may be considered as TT&R are therefore not explicitly identified within the definitions. Definitions should instead be applied to TT&R activities to determine whether they are captured.

It should be noted that definitions will ultimately be complemented by other policy documents – for example national data set specifications – which will provide further clarity on the application of these definitions for ABF purposes.

2.3.2. Applicability for ABF

At the highest level, the aim of this project is to provide a foundation for IHPA to determine whether it is feasible to transition the existing funding for TT&R to ABF (or other appropriate arrangements that reflect the volume of services delivered). In order for ABF to work, a number of elements must be present, including:

- a clear, consistent understanding of what services / activities are to be funded, and how they are to be measured;
- a taxonomy that allows services / activities that consume similar resources to be grouped in a meaningful way;
- the existence of rules that govern how services / activities can be counted for the purpose of funding;
- an approach to costing and pricing the services / activities to be funded; and
- an approach to allocating funding for the services / activities.

This project therefore needs to provide the foundation for each of these elements. As a result, the definitions have been framed to support the identification and quantification of outputs that can be used as a measure of activity.

2.4. Areas of overlap between the definitions

Both the literature and feedback from consultation consistently highlighted an intrinsic and often inseparable link between activities which support TT&R. Consequently, some activities – for example, when students undertake research as part of their clinical qualification or registration requirements – may be captured under the definitions of both 'teaching and training' and 'research'. The potential for double counting activities under the current definitions, and any resultant adverse consequences, have therefore been considered and tested using scenarios that were raised at stakeholder consultation workshops.

The areas of overlap and potential for double counting are considered to be small overall. Furthermore, for some activities (such as the example of a student undertaking research as part of their clinical qualification) both 'teaching and training' and 'research' resources would be required. For example, supervision / review activities would fall under the definition of teaching and training while maintenance of research project infrastructure would fall under the definition of research. It was therefore felt that there is insufficient materiality to warrant an increased degree of specificity in the definitions.

3. Teaching and training

This section describes amendments to the proposed draft definition of T&T (along with the underlying principles) that were presented for feedback at stakeholder consultation workshops.

This section also highlights the extent to which the draft definition encompasses the range of teaching and training activities provided by (or on behalf of) public health services.

3.1. Underlying principles and proposed draft definition of teaching and training

The Environmental Scan proposed the following set of principles for defining teaching and training for ABF purposes:

1. the definition should be concise and practical;
2. while a technical distinction for teaching and training could be defined, in practical terms the distinction between the two terms is 'artificial' or 'semantic'. Teaching and training are most often delivered in a joint and complimentary way. Therefore one definition should encapsulate the activities under both;
3. the definition should be easily adaptable to the changing nature and emerging trends in how teaching and training is conducted;
4. the definition should relate to medical, nursing, midwifery and allied health professions where the disciplines have a direct patient or consumer relationship in a public health service;
5. the definition should cover those professional levels that require exposure to a clinical environment in order to fulfil the qualification or registration requirements of the discipline in which they wish to practice;
6. the definition should cover those teaching and training activities that contribute to the attainment of a qualification or professional body registration;
7. the definition should only include activities and resources that are provided by or on behalf of public health services which are funded by the states and territories; and
8. the definition should recognise the direct and indirect resources incurred by a public health service required to support training and teaching. The definition should also recognise that some direct teaching and training is embedded in clinical service delivery.

With these principles forming an underlying framework, the Environmental Scan proposed that for ABF purposes teaching and training describes:

> ***"the activities provided by a public health service to facilitate the acquisition of knowledge, or practice of skills, that are prerequisites for an individual to gain the necessary qualifications (or recognised professional body registration) to practice in the medicine, nursing, midwifery or allied health professions."***

3.2. Feedback relating to the draft definition of teaching and training

Table 1, Table 2 and Table 3 summarise the key themes and outcomes relating to the teaching and training definition that arose from the stakeholder consultation workshops. Any new elements that have been incorporated into the definitions and / or underlying principles are identified in ***bold italic green text***. Elements that have been removed are shown in ~~***bold italic red strikethrough text***~~.

3.2.1. Feedback received regarding the underlying principles and draft definition of teaching and training

Table 1 Amendments to principles

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
1	Medical Interns / Registrars – are not covered by current principles.	No change	48	**Why:** Interns and Registrars are not explicitly identified in the definition, but are implicitly included through the requirement for individuals to be working toward achieving "professional body registration". Interns work towards achieving 'general' registration status, whereas registrars work towards achieving 'specialist' registration.
2	Principle 4 – does not include consideration of dentistry professionals. This principle currently states that "the definition should relate to medical, nursing, midwifery and allied health professions where the disciplines have a direct patient or consumer relationship in a public health service".	Revision	48	**Why:** Dentistry will be separately included in the definition in its own right rather than encapsulated under 'allied health'. **How:** Principle 4 will be re-worded to read "the definition should relate to medical, ***dentistry***, nursing, midwifery and allied health professions…"
3	Principle 4 – refers to 'professions', however, not all disciplines are 'professional' in nature (e.g. assistants in nursing or allied health). Consider re-wording.	Revision	48	**How:** Principle 4 will be re-worded to read "the definition should relate to medical, dentistry, nursing, midwifery and allied health ~~***professions***~~ where…"
4	Principle 5 – should be amended to include consideration of the teaching and training requirements for professionals seeking to be recognised as having a specialist, advanced or extended scopes of practice. This principle currently states that "the definition should	Revision	48	**Why:** There is clear evidence that some key groups (e.g. Nurse Practitioner candidates) require support by the health service to achieve the necessary qualifications. In other circumstances (particularly advanced and extended scope) additional qualifications may not be required even if they involve some

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
	cover those professional levels that require exposure to a clinical environment in order to fulfil the qualification or registration requirements of the discipline in which they wish to practice".			element of health service clinical supervision or support. **How:** Principle 5 will be re-worded to read "…in order to fulfil the qualification or registration requirements of the discipline in which they wish to practice***, and the attainment of additional qualifications to undertake specialist / advanced practice in the discipline***"
5	Principle 5 – the wording "wish to practice" may be considered subjective and should be more definitive.	Revision	48	**How:** Principle 5 will be re-worded to read "…to fulfil the qualification or registration requirements of the discipline in which they ~~***wish***~~ ***intend*** to practice…"
6	Principle 8 – that "the definition should recognise the direct and indirect resources incurred by a public health service…" is not prescriptive in the definition.	Revision	48	**Why:** This principle would require that the definition includes explicit acknowledgment of direct, indirect and embedded activities / resources The definition intends to cover all forms of related clinical T&T activities so this explicit acknowledgement is not required. Stakeholders also highlighted that the definition needs to remain flexible to changes in practice – specifically that "those activities that are direct today, may be embedded tomorrow". As a result, stipulating specific types of activity might introduce barriers to innovation. Additionally, this project sits in the context of other policy documents that will specify types of activity, where required. **How:** To ensure alignment with the high-level approach adopted to framing the definition, Principle 8 will be re-worded to read "the definition should ~~***recognise***~~ ***cover*** the direct***,*** ~~***and***~~ indirect ***and embedded*** resources incurred by a public health service ***that are*** required to support teaching and training. ~~***The definition should***~~

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
				~~***also recognise that some direct teaching and training is embedded in clinical service delivery.***~~"

Table 2 Scope/boundary of the definition

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
7	Continuing Professional Development (CPD) – currently excluded from the scope of the definition. Should it be included, especially given the increase in 'generalist' roles across all disciplines?	No change	33–35, 37	**Why:** CPD is not covered by the definition on the basis that: - it is ultimately an individual's responsibility (not the health service's) to support their own CPD; - some states and territories provide separate funding for CPD as part of award conditions; - CPD needs to be undertaken for all professionals. CPD volumes are therefore not a differential driver of TT&R costs across health services; - CPD is not nationally or professionally consistent. Including CPD would make it difficult to count activity on a consistent basis.
8	Specialist roles – definition does not account for nursing, midwifery and allied health training to achieve a specialist, advanced or extended scope of practice.	Revision	33–35, 37	**Why:** As reflected in Issue 4, there is clear evidence that some key groups (e.g. Nurse Practitioner candidates) require support by the health service to achieve the necessary qualifications. In other circumstance (particularly advanced and extended scope) additional qualifications may not be required even if they involve some element of health service clinical supervision or support. **How:** The definition will be re-worded to read "…to practice ***or***

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
				undertake specialist / advanced practice in medicine, dentistry, nursing, midwifery or allied health."
9	Registration requirements – should the definition be more specific regarding the registration requirements of different professions?	No change	31–40	**Why:** The broad use of the word "registration" has been adopted on the basis that the process for an individual to achieve registration (at any level) will need to be supported by a range of health service resources. Introducing additional specificity would be impractical given the variations in registration requirements across professional groups.
10	Dentistry – needs to be separately recognised in the definition	Revision	34, 43, 91	**Why:** Dentistry will be separately included in the definition in its own right rather than encapsulated under 'allied health'. **How:** The definition will be re-worded to read "…to practice medicine, ***dentistry***, nursing, midwifery or allied health."
11	Professionals seeking to re-enter the workforce after their registration has lapsed – should be included in the definition's scope.	Revision	88–89	**Why:** Professionals seeking to obtain registration in order to re-enter the workforce require essentially the same support / resources as those seeking registration for the first time i.e. extensive supervision and support within a clinical environment (particularly nurses and midwives). **How:** The definition will be amended to imply that qualification or registration can be for a purpose other than to enter the workforce. The definition will be re-worded to read "…an individual to ***attain*** ~~***gain***~~ the necessary qualifications or recognised professional body registration…"
12	Early graduates – should they be included in the definition's scope?	No change	31–40, 78–80,	**Why:** The feedback obtained during the consultation was varied as to whether health services consistently incur significant resource requirements to support new nursing, midwifery and allied health

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
				graduates. Additionally, there was no clear consensus whether significant additional resources are incurred for a significant period of time before these professionals provide substantiative service delivery benefits (and should hence be considered to be practicing rather than trainees). Nonetheless, inclusion or otherwise will be re-visited following the completion of the cost driver analysis, which will examine whether these groups result in a significant resource impost for health services.
13	Refresher courses and re-training – should they be included in the definition's scope?	No change	85, 88–89	**Why:** Individuals undertaking refresher or re-training courses do not enhance their existing qualifications or registration. On this basis, refresher courses and re-training are not captured by the definition and are considered normal course of business activities.
14	Definition reflects 'current state' – need to ensure that it can capture changes in practice over time and not introduce barriers to innovation.	No change	45–48	**Why:** The definition has been framed as broadly as possible to allow for changes in practice over time. It is expected that the definition will be subject to review / amendment to reflect changes in practice and the broader T&T environment. Additionally, emerging trends identified during the Environmental Scan and stakeholder consultation workshops were considered when developing the definitions (see Section 5.1)
15	The term 'allied health' – does not need to be defined for the purpose of the definition.	No change	41–42	**Why:** This project sits in the context of other policy documents that will specify the roles and professions that constitute 'allied health', where required. It is outside of the scope of this project to establish a definition for 'allied health'.
16	Medical specialist trainees – are they in or out	No	31, 37	**Why:** The wording of the initial draft definition incorporated vocational medical trainees (who are in training to achieve 'specialist'

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
	of scope of the definition?	change		registration status). Table 5 in the Environmental Scan has been amended to clarify this. The revision for issue 8 also provides further clarification.

Table 3 Other wording changes to the definitions

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
17	Application of the definition - need to ensure that the definition captures teaching and training activities that are provided **on behalf of** public hospitals / health services.	Revision	18	**Why:** The NHRA states that the Commonwealth will fund 'Teaching and training functions funded by states and undertaken in public hospitals or other organisations (such as higher education providers and training providers). **How:** The first sentence of the definition will be re-worded to read "The activities provided by ***or on behalf of*** a public health service…"
18	Specificity of T&T activity types - need to explicitly identify and explain the difference between direct, indirect and embedded T&T activities.	No change	30–31	**Why:** As per issue 6, the definition intends to cover all forms of related clinical T&T activities so this explicit acknowledgement is not required. Stakeholders also highlighted that the definition needs to remain flexible to changes in practice – specifically that "those activities that are direct today, may be embedded tomorrow". As a result, stipulating specific types of activity might introduce barriers to innovation. Additionally, this project sits in the context of other policy documents that will specify types of activity, where required.

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
19	The term "prerequisites" - change to "required to".	Revision	40, 48	**Why:** The word "prerequisites" is often used for other purposes (e.g. medical college entry criteria), which may confuse its use in the T&T definition. **How:** The definition will be re-worded to read "…the acquisition of knowledge, or practice of skills that are ***required*** ~~***prerequisites***~~ for…".
20	The term "professions" – remove from the last sentence in the definition.	Revision	48	**Why:** To provide additional flexibility. Inclusion of the word "professions" may preclude certain non-"profession" groups (e.g. Indigenous Health Workers). **How:** The final sentence of the definition will be re-worded to read "…to practice in ~~***the***~~ medicine, dentistry, nursing, midwifery, or allied health ~~***professions***~~".
21	"Registration" – wording should be more general. Suggest "entry to the profession".	No change	31–36	**Why:** "Entry to the profession" does not account for all categories of registration (such as specialist registration). Stakeholder feedback during consultations indicated that these categories of registration should be captured by the definition.
22	'Development of skills' - is a more appropriate term than 'practice of skills' to describe the outcomes of the teaching and training process.	Revision	27, 48	**How:** The definition will be re-worded to read: "…to facilitate the acquisition of knowledge, or ~~***practice***~~ ***development*** of skills…"
23	Consider separating or otherwise compartmentalising the definition to improve clarity.	Revision	48	**Why:** Sentence structure of definition is too long. **How:** The definition will be re-cut into two sentences. The revised definition will read: "…to facilitate the acquisition of knowledge, or development of skills***. These activities must be*** ~~***, that are***~~ required

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and revision (where applicable)
				for an individual to …”

3.3. Revisions to the underlying principles and draft definition of teaching and training

The principles underpinning the draft definition of teaching and training have been re-framed based on the feedback obtained from stakeholder consultation workshops and as detailed above in Table 1, Table 2 and Table 3.

The final principles underpinning the revised definition of teaching and training state that:

1. the definition should be concise and practical;
2. while a technical distinction for teaching and training could be defined, in practical terms the distinction between the two terms is 'artificial' or 'semantic'. Teaching and training are most often delivered in a joint and complimentary way. Therefore one definition should encapsulate the activities under both;
3. the definition should be easily adaptable to the changing nature and emerging trends in how teaching and training is conducted;
4. the definition should relate to medical, dentistry, nursing, midwifery and allied health, on the basis that these disciplines have a direct patient or consumer relationship in a public health service;
5. the definition should cover those professional levels that require exposure to a clinical environment in order to fulfil the qualification or registration requirements of the discipline in which they intend to practice, and the attainment of additional qualifications to undertake specialist / advanced practice in the discipline;
6. the definition should cover those teaching and training activities that contribute to the attainment of a qualification or professional body registration;
7. the definition should only include activities and resources that are provided by or on behalf of public health services which are funded by the states and territories;
8. the definition should cover the direct, indirect and embedded resources incurred by a public health service that are required to support teaching and training.

Box 1 summarises how the proposed draft definition for teaching and training has been refined to produce the updated draft definition in line with the revised principles presented above. Superscript numbers within the revised definition correspond to the issues identified in Table 1, Table 2 and Table 3 .

Box 1: Summary of revisions between the original and revised draft definitions of teaching and training

Original draft definition

Teaching and training describes:

the activities provided by a public health service to facilitate the acquisition of knowledge, or practice of skills, that are prerequisites for an individual to gain the necessary qualifications (or recognised professional body registration) to practice in the medicine, nursing, midwifery or allied health professions.

Revised definition (showing proposed changes)

Teaching and training describes:

the activities provided by ***or on behalf of***[17] a public health service to facilitate the acquisition of knowledge, or ~~***practice***~~ ***development***[22] of skills. ***These activities must be~~, that are~~***[23] ~~***prerequisites***~~ ***required***[19] for an individual to ***attain*** ~~***gain***~~[11] the necessary qualifications ~~(~~or recognised professional body registration~~)~~ to practice***, or undertake specialist / advanced practice***[8], in ~~***the***~~[20] medicine, ***dentistry***[10], nursing, midwifery or allied health ~~***professions***~~[20].

Revised definition

Teaching and training describes:

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, or undertake specialist / advanced practice, in medicine, dentistry, nursing, midwifery or allied health.

3.4. Scope and use of the proposed definition of teaching and training

Table 4 to Table 10 summarise a range of teaching and training activities that currently occur in public health services and establishes the extent to which these activities are incorporated within the draft teaching and training definition. The tables also identify where activities are predominantly included in TT&R block funding or in patient costs – for example, DRG and Tier 2. Jurisdictions currently exclude those TT&R activities as defined under the Australian Hospital Patient Costing Standards (AHPCS) from the National Hospital Cost Data Collection (for ABF) and block funded hospital expenditure (where possible). It is thus presumed that it is those same TT&R activities, which fall within the AHPCS definitions, that predominantly receive TT&R block funding.

These tables are not intended to be an exhaustive list of all types of activities but aims to provide sufficient detail to capture the key conceptual elements of the definition.

3.4.1. Coverage of proposed teaching and training definition versus existing arrangements

Table 4 Coverage of proposed teaching and training definition versus existing arrangements by activity (general)

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Direct T&T *(including lectures, tutorials, assessment, simulation training, Grand Rounds etc.)*	✓	✓	
Indirect T&T *(including placement management and coordination activities.)*	✓		✓
Embedded T&T *(including ward rounds, operating theatre etc.)*	✓		✓

Table 5 Coverage of proposed teaching and training definition versus existing arrangements by clinical* student placements

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Nursing placements	✓	✓	
Midwifery placements	✓	✓	
Allied health placements	✓	✓	
Dentistry placements	✓	✓	
Medical placements	✓	✓	
Clinical student placement program administration / coordination activities	✓		✓

Notes: ¥ 'Clinical' in this context relates to medicine, dentistry, nursing, midwifery and allied health.
CMO: Career Medical Officer; HMO: Higher Medical Officer.

Table 6 Coverage of proposed teaching and training definition versus existing arrangements by early graduates/first year entry

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Medical graduates (interns)	✓	✓	
Dentistry graduates (interns)	✓	✓	
Allied health interns *(Psychology, Radiology, Pharmacy, Medical Physics)*	✓	✓	
Nursing & midwifery first year graduates			✓
Allied health first year graduates (non-interns)			✓

Table 7 Coverage of proposed teaching and training definition versus existing arrangements by advanced training

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Vocational medical and dental training to achieve specialist registration	✓	✓	
Nursing – Qualifications to achieve recognition as a Nurse Practitioner	✓	✓	✓
Nursing – Qualifications to achieve recognition as a nurse specialist or advanced scope of practice	✓		✓
Midwifery – Qualifications to achieve recognition as a specialist midwife or advanced scope of practice • *includes Eligible Midwives with prescribing rights*	✓	✓	✓
Allied Health – Qualifications to achieve recognition as a specialist, consultant or advanced / extended scope of practice	✓		✓

Table 8 Coverage of proposed teaching and training definition versus existing arrangements by research activity associated with teaching and training

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Clinical[¥] student research project supervision / review (curriculum-based)	✓	✓	
Clinical[¥] student research project supervision / review (non-curriculum-based)			✓

Notes: [¥] 'Clinical' in this context relates to medicine, dentistry, nursing, midwifery and allied health.

Table 9 Coverage of proposed teaching and training definition versus existing arrangements by other clinical professional training

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Continuing professional development • *includes professionals of all disciplines not in early graduate years or training to achieve a specialist, advanced or extended scope of practice (e.g. medical 'Residents', CMOs / HMOs and their equivalent in other disciplines)*			✓
Professionals seeking to re-enter their profession after registration has lapsed	✓		✓
Clinical refresh / retraining activities			✓
Other clinical[¥] knowledge and skills training related to new technologies[†], techniques and therapies			✓

Notes: CMO: Career Medical Officer; HMO: Higher Medical Officer.

Table 10 Coverage of proposed teaching and training definition versus existing arrangements by other health service teaching and training

Recipient group / activity	Included in draft definition of T&T	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)
Orientation / induction			✓
Occupational health and safety			✓
Security awareness			✓
Other health service-initiated training			✓
Training to achieve safety / quality accreditation			✓
Up-skilling activities for non-clinical¥ professions			✓
Non-patient-facing clinical support roles			✓
Corporate, management and leadership training			✓

Notes: † IHPA separately monitors and reviews the impact of new technologies to accurately account for them in the pricing of public hospital services.
¥ 'Clinical' in this context relates to medicine, dentistry, nursing, midwifery and allied health.
CMO: Career Medical Officer; HMO: Higher Medical Officer.

4. Research

This section describes amendments to the proposed definition of research (along with underlying principles) that were presented for feedback at stakeholder consultation workshops.

This section also highlights the extent to which the draft definition encompasses the range of research activities provided by (or on behalf of) public health services.

4.1. Underlying principles and proposed draft definition of research

The Environmental Scan proposed the following set of principles for defining research for ABF purposes:

The definition of research should:

1. result in an output(s) that generates new knowledge;
2. require that the activities associated with research are undertaken in accordance with a structured, methodical or systematic approach;
3. only capture activity that is approved through an appropriate governance body or ethics committee structure of the health service / jurisdiction;
4. include activities that are conducted within the public health service but that may be instigated and managed by an affiliated organisation;
5. result in an output(s) that have applicability in a wider context than just the organisation conducting the research;
6. allow for a broader range of investigations and applications than just those related to patient care;
7. exclude activities that are part of a public health service's normal course of business to deliver high quality care and safe environments (i.e. clinical audit, quality assurance, continuous improvement);
8. exclude outcomes that are a secondary product of clinical service delivery or a teaching and training curriculum;
9. exclude any direct costs associated with a research activity which were initially intended to be included within the conduct of the research activity. For ABF purposes, this would therefore eliminate any costs that were directly related to a research project which has received external or tied funding; and
10. include other impacts which are not directly tied to costs but may also relate to other effects on clinical service delivery (e.g. changes in length of stay, change in normal clinical pathways etc.)

With these principles forming an underlying framework, the Environmental Scan proposed that research describes:

> ***"an activity undertaken in a public health service where the primary aim is the advancement of knowledge that ultimately aims to improve patient health outcomes. The activity must be undertaken in a structured and ethical way, be formally approved by a research governance or ethics body, and have potential for application outside of the health service in which the activity is undertaken.***

For ABF purposes, the definition of research relates to:

> ***the public health service's direct and indirect contribution to research where the cost and resources incurred are not directly tied to an alternative source of research funding."***

4.2. Feedback relating to research

Table 11, Table 12 and Table 13 summarise the key themes and outcomes relating to research that arose from the stakeholder consultation workshops.

Table 11: Feedback received regarding the draft definition of research – Amendments to principles

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
1	Principle 5 – should reconsider use / framing. This principle states that research activities should "result in an output(s) that have applicability in a wider context than just the organisation conducting the research".	Revision	58	**Why:** It was considered too difficult to arrive at a wording that would capture the essence of 'external application' of research without being too prescriptive. The existing wording was considered the best available to capture the intent of this phrase while maintaining the high-level approach to drafting the definition. **How:** The principle will be re-worded to read "…result in an output(s) that have ***potential*** applicability …"
2	Principle 8 – wording should be clarified. This principle states that "the definition should exclude outcomes that are a secondary product of clinical service delivery or a training and teaching curriculum."	Revision	58	**Why:** This principle was initially drafted to preclude any 'serendipitous' discoveries from being considered research, however, Principle 3 (which requires research to be approved by a governance or ethics committee) will serve this purpose, thereby making Principle 8 redundant. **How:** The principle will be deleted.
3	Principle 9 – wording should be clarified. This principle states that for ABF purposes, the definition of research should "exclude any direct costs associated with a research activity which were initially intended to be included within the conduct of the research activity."	Revision	58	**Why:** The original intent of the principle was to ensure that the definition does not include research activities that are funded for a specific purpose through external (non-government) sources (e.g. commercially-sponsored research). Feedback indicated that the principle needs to be re-phrased to make the intent clearer. **How:** The principle will be re-worded to read "…exclude any ~~***direct***~~ costs ***related to*** ~~***associated with***~~ a research activity ~~***which were initially intended to be included within the conduct of the research activity***~~ ***that are directly tied to a funding source other than the state or territory government***."

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
4	Principle 10 – meaning is unclear and should be clarified. The principle currently states that the definition of research should "include other impacts which are not directly tied to costs but may also relate to other effects on clinical service delivery (e.g. changes in length of stay, change in normal clinical pathways etc.)".	Revision	58	**How:** The principle will be re-worded to read "~~***include other impacts which are not directly tied to costs but may also relate to other effects on clinical service delivery***~~ ***recognise that some research activities which involve patient interaction may result in impacts on clinical service delivery other than just the direct costs of research*** (e.g. changes in length of stay, change in normal clinical pathways etc.)".

Table 12 Feedback received regarding the draft definition of research – Scope/boundary of the definition

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
5	Research students – definition does not explicitly recognise students studying for research degrees.	No change	-	**Why:** The way the definition of research activities are currently framed **does** capture research students studying for higher degrees (e.g. Masters, PhD). There may be a very small degree of overlap in those activities covered by the definition of both 'teaching and training', and 'research', and it is unlikely that the overlap is sufficiently material to warrant explicit treatment within the definition.
6	Health system performance research – should be included in definition.	Revision	-	**Why:** Health system performance research represents a significant area of research that should be explicitly recognised in the definition. **How:** The definition will be re-worded to read "…that ultimately aims to improve ***consumer and*** patient health outcomes ***and/or health system performance***"
7	Requirement for potential application outside the health service – is this too restrictive?	No change	50	**Why:** It was considered too difficult to arrive at a wording that would capture the essence of 'external application' of research without being too prescriptive. The existing wording was considered the best available to capture the intent of this phrase while maintaining the

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
				high-level approach to drafting the definition.

Table 13 Feedback received regarding the draft definition of research – Other wording changes to the definition

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
8	Change 'an activity' to 'the activities' in order to align with the definition of teaching and training.	Revision	-	**Why:** To ensure a consistent frame of reference between the definitions of 'teaching and training' and 'research'. **How:** The definition will be re-worded to read "research describes ~~***an activity***~~ ***the activities*** undertaken by a public health service…"
9	Specificity of research activity types - need to explicitly identify and explain the difference between direct, indirect and embedded research activities.	Revision	54	**Why:** As per teaching and training (Table 1, issue 6 and Table 3, issue 18) above, it is assumed that all activity types are included and there is no need to specifically identify and define each activity type separately. **How:** Definition will be amended to remove references to 'direct' and 'indirect'. The definition will be re-worded to read "For ABF purposes, the definition of research relates to the public health service's ~~***direct and indirect***~~ contribution to research…"
10	The term "directly tied" - need to clarify its use (ie. tied to what?).	Revision	50, 55	**Why:** Use of "directly tied" in the definition is not sufficiently clear and is open to interpretation. **How:** The final sentence of the definition will be amended to read "…***excluding*** ~~***where***~~ the cost***s of research activities*** ~~***and resources incurred***~~ ***that*** are ~~***not***~~ directly tied to ~~***an alternative source of research***~~ funding ***received from a source other than the state or territory***."
11	Research 'capability' - need to clarify that health	Revision	-	**Why:** To remove ambiguity regarding how state / territory funding

Issue No.	Feedback obtained	Outcome	Environmental Scan page reference	Justification for outcome and how revisions have been made (where applicable)
	services' main role in relation to research is to maintain research 'capability' rather than delivering 'research' itself.			supports the delivery of research outputs. **How:** The revised definition will read "For ABF purposes, the definition of research relates to the public health service's contribution to ***maintain*** research ***capability***…".
12	Duplicate use of the word 'aim' in first sentence of the definition	Revision	-	**How:** First sentence will be re-worded to read "…where the primary ~~***aim***~~ ***objective*** is the advancement of knowledge…"

4.3. Revisions to the underlying principles and draft definition of research

The principles underpinning the draft definition of research have been re-framed based on the feedback obtained from stakeholder consultations and as detailed above in Table 11, Table 12 and Table 13.

The final principles underpinning the revised definition of research state that the definition of research should:

1. result in an output(s) that generates new knowledge;
2. require that the activities associated with research are be undertaken in accordance with a structured, methodical or systematic approach;
3. only capture activity that is approved through an appropriate governance body or ethics committee structure of the health service / jurisdiction;
4. include activities that are conducted within the public health service but that may be instigated and managed by an affiliated organisation;
5. result in an output(s) that have potential applicability in a wider context than just the organisation conducting the research;
6. allow for a broader range of investigations and applications than just those related to patient care;
7. exclude activities that are part of a public health service's normal course of business to deliver high quality care and safe environments (i.e. clinical audit, quality assurance, continuous improvement);
8. exclude any costs related to a research activity that are directly tied to a funding source other than the state or territory government (this was formerly principle 9);
9. recognise that some research activities which involve patient interaction may result in impacts on clinical service delivery other than just the direct costs of research (e.g. changes in length of stay, change in normal clinical pathways etc.) (this was formerly Principle 10).

Box 2 summarises how the proposed draft definition for research has been refined to produce the updated draft definition. Superscript numbers within the revised definition correspond to the issues identified in Table 11, Table 12 and Table 13.

Box 2: Summary of revisions between the original and revised draft definitions of research

Original draft definition

Research describes:

an activity undertaken in a public health service where the primary aim is the advancement of knowledge that ultimately aims to improve patient health outcomes. The activity must be undertaken in a structured and ethical way, be formally approved by a research governance or ethics body, and have potential for application outside of the health service in which the activity is undertaken.

For ABF purposes, the definition of research relates to:

the public health service's direct and indirect contribution to research where the cost and resources incurred are not directly tied to an alternative source of research funding.

Revised definition (showing proposed changes)

Research describes:

~~***an activity***~~ ***the activities***[8] undertaken in a public health service where the primary ~~***aim***~~ ***objective***[12] is the advancement of knowledge that ultimately aims to improve ***consumer and***[6] patient health outcomes ***and/or health system performance***[6]. The activity must be undertaken in a structured and ethical way, be formally approved by a research governance or ethics body, and have potential for application outside of the health service in which the activity is undertaken.

For ABF purposes, the definition of research relates to:

the public health service's ~~***direct and indirect***~~[9]contribution to ***maintain***[11] research ***capability***[11]***, excluding*** ~~***where***~~ the cost***s of research activities*** ~~***and resources incurred***~~ ***that*** ~~are~~ ~~***not***~~ directly tied to ~~***an alternative source of research***~~ funding ***received from a source other than the state or territory***[10].

Revised definition

Research describes:

the activities undertaken in a public health service where the primary objective is the advancement of knowledge that ultimately aims to improve consumer and patient health outcomes and/or health system performance. The activity must be undertaken in a structured and ethical way, be formally approved by a research governance or ethics body, and have potential for application outside of the health service in which the activity is undertaken.

For ABF purposes, the definition of research relates to:

the public health service's contribution to maintain research capability, excluding the costs of research activities that are directly tied to funding received from a source other than the state or territory.

4.4. Scope and use of the proposed definition of research

Similar to the approach presented in the teaching and training section, Table 14 and Table 15 summarise the range of research activities that currently occur in public health services and establishes the extent to which these activities are incorporated within the draft research definition. The tables also identifies where activities are predominantly included in TT&R block funding or in patient costs – for example, DRG and Tier 2. Jurisdictions currently exclude those TT&R activities as defined under the AHPCS from the National Hospital Cost Data Collection (for ABF) and block funded hospital expenditure (where possible). It is thus presumed that it is those same TT&R activities, which fall within the AHPCS definitions, that predominantly receive TT&R block funding.

The final column in Table 14 and Table 15 recognise those activities that receive 'non-government funding' such as donations, trust funds and private revenue. These tables are not intended to be an exhaustive list of all types of activities but aims to provide sufficient detail to capture the key conceptual elements of the definition.

Table 14 Coverage of proposed research definition versus existing arrangements by activity (general)

Activity	Included in draft definition of research	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)	Received from non-government sources†
Direct research *(including research projects in the field of clinical, biomedical, translational, epidemiological, clinical trials, heath system performance, etc.)*		*	✓	✓
Indirect research *(including administration, accreditation, governance and coordination activities.)*	✓	✓	✓	✓
Embedded research *(including where research projects directly interact with patient care, such as clinical trials.)*			✓	

Notes: * while direct research costs are separated in a 'research' cost bucket under the AHPCS, their separation is for the purpose of excluding them from ABF-related costs. Direct research costs may not be TT&R block funded.
† Including donations, trust funds and private revenue

Table 15 Coverage of proposed research definition versus existing arrangements by activity (specific)

Activity	Included in draft definition of research	Predominantly in TT&R block funding	Predominantly in patient costs (DRG, Tier 2 etc.)	Received from non-government sources†
Research projects (e.g. clinical, biomedical, translational, epidemiological, clinical trials, heath system performance, etc)		*	✓	✓
Research governance and ethics coordination / administration	✓	✓		
Other research accreditation, administration and compliance	✓	✓		
Research grant application administration	✓	✓	✓	
Paper / conference publication or presentation administration	✓	✓	✓	
Research infrastructure initial setup (e.g. labs, animal houses)			✓	✓
Research infrastructure ongoing maintenance (e.g. labs, animal houses)	✓		✓	✓
Research student coordination and administration	✓		✓	✓
Implementation and commercialisation				✓
Health service continuous / quality improvement activities			✓	
Health service clinical audit activities			✓	
Contribution of data to clinical registries			✓	✓

Notes: * while direct research costs are separated in a 'research' cost bucket under the AHPCS, their separation is for the purpose of excluding them from ABF-related costs. Direct research costs may not be TT&R block funded.
† Including donations, trust funds and private revenue

5. Other outcomes from stakeholder feedback workshops

The trends, issues, developments and cost drivers presented in the Environmental Scan were also and tested and validated during stakeholder consultation workshops. Some stakeholders identified additional areas for consideration. These issues are identified below.

5.1. Additional trends, issues and developments in TT&R

Sections 2.1.3 and 2.2.3 of the Environmental Scan recognised a number of emerging trends in TT&R. Additional teaching and training trends, issues and developments that were identified during stakeholder consultation workshops included that:

- **the burden and distribution of disease is changing**. Consequently, teaching and training needs to take place in new settings / locations;
- **the nature of supervision is changing**. Oversight of some procedures / practices can now take place via online media;
- **the intensity (and therefore quality) of teaching and training is changing**. There is a general feeling that graduates are less work ready now than they were five to ten years ago;
- **workplace-based assessment is becoming more prevalent**. This will result in a greater impact on the workload of trainers / assessors. However, work-based assessment may also improve quality;
- the medical teaching and training 'industry' is expanding, with a continued influx of international students. **The commercial orientation of education providers may change how teaching and training impacts on health service operating costs**.

Additional research trends, issues and developments that were identified during stakeholder consultation workshops included that:

- **links between medical research institutes and universities are becoming more common, and more collaborative**, thus facilitating personnel movements between these institutions (co-appointments);
- **public / private partnerships are becoming more common**, although the resource impacts of this trend have not been fully established;
- **there is a greater orientation towards specialist training** (in all disciplines), which appears to be driving greater research into 'niche' areas;
- **infrastructure limitations are impeding growth**, particularly in those areas not typically recognised as research 'centres of excellence';
- **global competition for competitive research funding is increasing**. Clinical trials are increasingly being attracted by Europe/Asia. This may require a greater investment in staff and resources to be able to attract competitive research funding;
- **a focus on cost efficacy (not just clinical efficacy)** is driving areas of research;
- **a greater volume of research is being undertaken through Investigator-originated modalities** – predict and prevent model;
- **there is a greater emphasis on collaboration**, which is driving an increase in multi-centre clinical trials.

These factors have been taken into consideration as part of the process to refine the definitions, to ensure that they provide sufficient flexibility for any such changes to be captured, where they occur over time.

5.2. Additional cost drivers identified

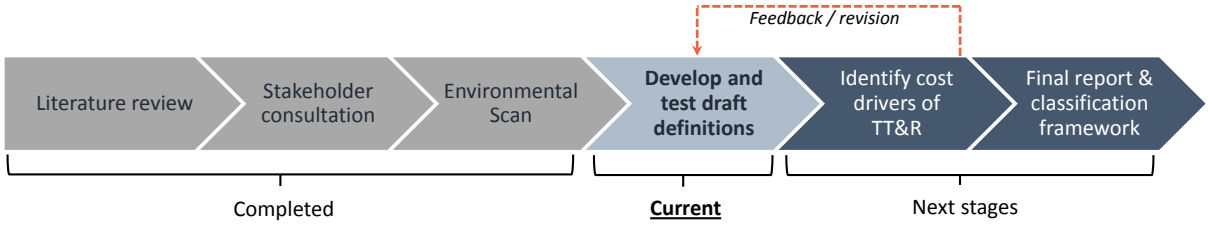
The discussion at stakeholder consultation workshops also suggested the potential for some additional cost drivers that were not explicitly identified in the environmental scan, including:

- **The volume of translational / commercialised research projects**. This cost driver was proposed on the basis that there is a link between these types of research and higher coordination and support costs for health services; and
- **The mix of research disciplines / types.** Other things being equal, the more diverse the mix of research at a given health service, the greater the support and delivery costs.

6. Next steps

Figure 3 shows the major project milestones completed leading up to the determination of draft TT&R definitions, along with the major deliverables that will follow in the next stages of the project. Following submission of this addendum to IHPA, the revised draft definitions will be taken to IHPA's Teaching, Training and Research Working Group for endorsement and IHPA's Clinical Advisory Committee for comment. Approval of the revised draft definitions will then be sought from the Pricing Authority.

Figure 3: Current project progress against major deliverables and next steps



The definitions of TT&R provide a basis for conducting a cost driver analyses in the next stage of the project. The cost driver analysis is expected to take place over January and February 2014 and will determine the factors that have the most significant relationships between TT&R activity volumes and health service operating costs. The cost driver analysis will also test whether the definitions are backed by quantitative evidence and may result in some revision to the definitions – if there is compelling evidence that components should be added, removed or changed.

The findings of the cost driver analysis will then be used in conjunction with the definitions of TT&R to develop a classification framework that will consider the ways in which the identified cost drivers can be grouped in a meaningful way to explain resource usage. The findings from all project stages will subsequently be summarised in a final project report that will draw together the findings from the literature review, environmental scan, cost driver analysis and classification development framework.