Health Education and Training

Clinical placements across Australia: capturing data and understanding demand and capacity

December 2008

NHWT
NATIONAL HEALTH WORKFORCE TASKFORCE

Australian Health Ministers' Advisory Council
Health Workforce Principal Committee

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Executive Summary

The National Health Workforce Taskforce (NHWT) is exploring the development of education and training delivery models that will meet the existing and projected needs of the health care sector, in ways that will attract potential, retain existing and re-attract former health professionals.

The primary aim is to ensure that there is an appreciable increase in the overall numbers of suitably trained and qualified workers, in professions and disciplines where priority action has been designated; and that equitable distribution across Australia is facilitated over time.

In 2005 the Productivity Commission considered a range of issues affecting the sustainability of clinical training. Systemic problems were identified, including a dearth of information on clinical training capacity and numbers of students seeking clinical placements. Council of Australian Governments (COAG) members signed a National Health Workforce Memorandum of Understanding (MOU) at the COAG meeting on 14 July 2006. The preamble to the MOU recognises that improving the supply and distribution of the health workforce to better meet community need is a national priority requiring cooperative effort by the health, industry and education and training sectors.

Recent increases in higher education (HE) and vocational education and training (VET) places will go some way to alleviate the expected decreases in the health workforce, but the lack of availability of clinical placements will compound existing pressures on trainee throughput and resource allocation. The health system is already under stress from the requirement to place current students, and these pressures will increase as the majority of clinical supervisors and teachers begin to retire and as student numbers increase.

The emerging demands across a range of disciplines for quality clinical training placements require the building of cross sectoral collaboration and flexibility between the tertiary education and vocational training providers, health care providers/industry and governments.

Clinical training is a significant part of health education and essential to the development of the requisite practical skills. Responsibility for this training is currently split between education providers and the health sector; however, there is no clear delineation of respective roles and obligations. There is also a significant gap in the knowledge of current training load, distribution of placements and health service capacity, and disparate funding arrangements across different health settings. A starting point is to map what is currently known about clinical training activity and placement capacity in order to consolidate a national approach.

The value of collecting national data on clinical training is yet to be fully explored. Whilst post hoc data collections would provide a useful reporting function it is acknowledged that they must also add value for jurisdictions, health services and education providers in their planning, coordination and organisation of clinical placements.

There is a range of critical questions that are raised in this Discussion Paper for discussion and comment by stakeholders. The key options for what might present feasible ways forward are raised, along with the recognition of the need to ensure that any option does not necessarily require moving away from existing systems or creating undue administrative or financial burden.

1 Purpose

This Discussion Paper seeks to investigate the current systems across jurisdictions that generate and collect data regarding the demand for clinical placement. It sets out the basic approaches to identifying and enumerating the supply of and demand for clinical placements. It then considers the benefits of a national clinical placement data collection and presents some discussion questions to progress a dialogue about the opportunities for developing ongoing processes of collection.

The proposed concept of a national clinical placement data collection would need to ensure data integrity through secure collection, that it is fit for purpose, informs planning, and does not create unnecessary administrative burden. Moving towards data collection that achieves this raises a number of questions as to what is needed; for what purpose; and how might it be structured to meet requirements of the range of stakeholders involved.

In addition to the agreement on the collection of relevant data, identified benchmarks strengthen the likelihood of a reasonable comparison of either the capacity of health service providers or the requirements of education providers for clinical placements. Developing indicators of capacity may provide the basis for ongoing dialogue about how either gaps or overlaps in the system can be optimally managed.

There would be opportunities to explore whether there are data elements required by some stakeholders, that if included would increase the likelihood of compliance. As part of the project it is important to identify what might be incentives or disincentives to the successful implementation. This paper presents a set of questions to draw out this information and assist in understanding the needs of all stakeholders.

In summary, the purpose of this Paper is to:

- Consider quantifying clinical placement demand from education providers nationally
- Explore the possibility of quantifying the current health system capacity
- Determine the feasibility of a national clinical placement data collection and consider the options for a preferred collection approach
- Provide a basis for discussion with the stakeholders and seek feedback on sustainable approaches to the delivery and organisation of clinical training
- Consider what impact the above would make to the planning and coordination of clinical placements to meet both quantum and distribution needs for each health profession.
- Consider the appropriate mechanism for developing a national clinical placement data collection

* **Please note** that this discussion paper was prepared prior to the COAG agreement to the establishment of a national health workforce agency. One of the roles of this agency will be to support the clinical training of undergraduates in health. In this environment, the development of a national approach to the collection of information on clinical training requirements and delivery and the management of clinical placements becomes even more important. Consideration of the issues raised in this paper will be critical to informing the new agency on directions and stakeholder views on these matters.

2 Background

The health workforce has become increasingly specialised. Thirty-eight per cent of the health and community services workforce has a bachelor degree or higher qualification compared with 24% across all industries. Strategies to maximise productivity and improve the efficiency, effectiveness and responsiveness of the health workforce by fully utilising the skills and knowledge of experienced and highly trained staff will be critical to achieving workforce sustainability. The delivery of health services is constrained by limitations within the current health workforce, of which the availability of clinical training placements is of major significance.

In 2005 the Productivity Commission considered a range of issues affecting the sustainability of clinical training. Systemic problems were identified, including a dearth of information on clinical training capacity and numbers of students seeking clinical placements. Both COAG and health ministers have since agreed to specifically address clinical training data issues as a priority.

The increases in the number of health professionals in training have also resulted in a significant increase in the requirement for effective clinical training, a significant part of their undergraduate education. This is essential to the development of the practical clinical skills required. Clinical training is currently a split responsibility between education providers and the health sector and there is a lack of clarity about respective roles and responsibilities. This furthermore hampers innovation and reform of that training.

The Australian health system is already evidentially under stress, primarily demonstrated by a lack of capacity to provide clinical training for the new places already planned for, and these pressures will increase as those who form the majority of supervisors and teachers for clinical training begin to retire just as the increased numbers of students commence the clinical training aspects of their education. There is reasonable doubt that the current arrangements for clinical training will be able to sustain the projected increased requirements without structural change.

Growth in domestic students

Substantial increases in higher education and vocational education and training places have recently been provided. In 2002, the number of commencing medical students was 1,470. In 2006 the Commonwealth Government announced a substantial increase in the number to 3,074 by 2010, creating an overall increase of 47% from 2006-2010 through an additional 1,604 places. During this time, nursing places will increase by 5,853 places from 8,042 in 2002 to 13,895 in 2010. This includes an additional 1500 nursing university places provided by the Commonwealth Government with 500 available to be taken up in 2008. However, as the following table shows, only some 200 of the 500 extra places in 2008 were taken up. It is understood that the low take up is due to a range of factors including funding for, and capacity of, the health and higher education sectors to provide sufficient clinical training.

Commencing students	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nursing	8,042	8,541	9,265	9,675	10,246	11,093	11,298	12,395	13,895	13,895	13,895
Medicine	1,470	1,511	1,700	1,871	2,071	2,560	2,943	2,831	3,074	3,074	3,074
Allied health	5,354	5,526	5,699	5,792	5,919	6,494	6,494	6,494	6,494	6,494	6,494

Relative to the 2005 academic year, the planned growth in clinical placement requirements expressed in days is quite startling:

- By the 2013 academic year, it is estimated that about 632,700 additional medical clinical placement days will be required per annum.
- By the 2013 academic year, it is estimated that growth in demand for clinical placements of more than 613,750 additional nursing placement days will be required per annum.
- By the 2013 academic year, it is estimated that over 82,988 additional allied health clinical placement days will be required per annum.

The estimated clinical training requirements by days and hours per professional category and year of course are set out in the following Table. The assumptions for these calculations are set out in Appendix 1.

Medicine

	2005	2006	2007	2008	2009	2010	2011	2012	2013
1st year	1,871	2,071	2,560	2,943	2,831	3,074	3,074	3,074	3,074
2nd year	1,770	1,871	2,071	2,560	2,943	2,831	3,074	3,074	3,074
3rd year	1,511	1,700	1,871	2,071	2,560	2,943	2,831	3,074	3,074
4th year	1,470	1,511	1,700	1,871	2,071	2,560	2,943	2,831	3,074
Total Students	**6,622**	**7,153**	**8,202**	**9,445**	**10,405**	**11,408**	**11,922**	**12,053**	**12,296**
Days per year									
1st year	65,953	73,003	90,240	103,741	99,793	108,359	108,359	108,359	108,359
2nd year	62,393	65,953	73,003	90,240	103,741	99,793	108,359	108,359	108,359
3rd year	259,703	292,188	321,578	355,953	440,000	505,828	486,578	528,344	528,344
4th year	252,656	259,703	292,188	321,578	355,953	440,000	505,828	486,578	528,344
Total	**640,705**	**690,846**	**777,008**	**871,512**	**999,487**	**1,153,979**	**1,209,123**	**1,231,639**	**1,273,405**

Nursing

	2005	2006	2007	2008	2009	2010	2011	2012	2013
1st year	9,675	10,246	11,093	11,298	12,395	13,895	13,895	13,895	13,895
2nd year	9,265	9,675	10,246	11,093	11,298	12,395	13,895	13,895	13,895
3rd year	8,541	9,265	9,675	10,246	11,093	11,298	12,395	13,895	13,895
Total	**27,481**	**29,186**	**31,014**	**32,637**	**34,786**	**37,588**	**40,185**	**41,685**	**41,685**
Days per year									
1st year	241,875	256,150	277,325	282,450	309,875	347,375	347,375	347,375	347,375
2nd year	347,438	362,813	384,225	415,988	423,675	464,813	521,063	521,063	521,063
3rd year	533,813	579,063	604,688	640,375	693,313	706,125	774,688	868,438	868,438
Total	**1,123,125**	**1,198,025**	**1,266,238**	**1,338,813**	**1,426,863**	**1,518,313**	**1,643,125**	**1,736,875**	**1,736,875**

Allied Health

	2005	2006	2007	2008	2009	2010	2011	2012	2013
1st year	5792	5919	6494	6494	6494	6494	6494	6494	6494
2nd year	5919	5792	5919	6494	6494	6494	6494	6494	6494
3rd year	5792	5919	5792	5919	6494	6494	6494	6494	6494
Total Students	**17503**	**17630**	**18205**	**18907**	**19482**	**19482**	**19482**	**19482**	**19482**
Days per year									
1st year	144,800	147,975	162,350	162,350	162,350	162,350	162,350	162,350	162,350
2nd year	221,963	217,200	221,963	243,525	243,525	243,525	243,525	243,525	243,525
3rd year	362,000	369,938	362,000	369,938	405,875	405,875	405,875	405,875	405,875
Total	**728,763**	**735,113**	**746,313**	**775,813**	**811,750**	**811,750**	**811,750**	**811,750**	**811,750**

NHWT clinical training project

The NHWT Clinical Training project aims to develop a range of recommendations on effective sustainable approaches to the delivery, organisation, efficiency and capacity of clinical training. In response to this set of challenges, the project is organised across five streams of work:

Stream 1. Data, organisation and capacity. This stream of work will gather national data on current clinical training load, capacity being utilised and its distribution for each profession. Identifying the current impact of clinical training on the system will inform the broader project work on funding responsibilities, planning frameworks, principles and processes, new models and alternate settings for clinical training. This discussion paper forms part of Stream 1.

Stream 2. Funding arrangements & responsibilities This stream of work is examining the funding policy environment that exists for the provision of clinical training at a national level; reviewing the current arrangements, in order to report on alternate arrangements to address perceived risks and/or potential inequities.

Stream 3. New models & innovation The stream of work is investigating and documenting models of clinical training and innovative strategies that demonstrate potential for increasing the capacity to expand the number of clinical placements; provide clinical training in new and alternate settings including multi-disciplinary approaches and flexible delivery; facilitate technology based training; and alternative training arrangements.

Stream 4. Governance & organisation This stream of work is investigating the organisational issues that are currently constraining the system's capacity to provide clinical training, considering alternative organisational arrangements to better manage clinical training, and consider the appropriate governance for those arrangements. The objective is to promote optimal design, allocation and delivery of clinical placements, through system development; improved tools and resources; and potential governance structures to support clinical placement into the future.

Stream 5. Quality, efficiency & effectiveness This stream is investigating the need to develop relevant indicators of quality, efficiency and effectiveness that are clearly evident from the lack of consistency in accreditation standards and the related costs that are incurred. Given the level of growth in quantum and complexity of current and proposed clinical training, the current clinical education and training accreditation arrangements are in need of review.

Whilst the project is segmented for investigation purposes, it is intended that all streams inform the broader analysis and reform proposals take the inter-connectedness of these streams into full account. The primary outcome is to provide policy advice on potential reform actions and recommendations for system improvements.

Capturing data and understanding demand and capacity

For reasons of clarity, it is essential that the meaning of several terms be understood in the way that they are intended here. It is recognised that, in industry, many key terms have specific meanings in some contexts and differ between contexts. This paper focuses on clinical training and placements for **undergraduate university** courses in health.

'Clinical training' is the training component that is undertaken in a clinical setting (broadly defined) for the purposes of building practical competencies relating to clinical practice. Clinical placements would normally offer supervision and may involve 'class room' work. For the purposes of this paper the term 'clinical placement' refers to the actual location in which a unit of clinical training is undertaken.

By 'demand for clinical placements' we mean the overall magnitude of the range of variables that contribute to clinical training experience that is required by the trainee. These include the number of students to be placed, the duration of that training, the number of hours/ days, the distribution of those hours across the week/month/year, the supervision requirements including hours and ratio, the location of the training and of course the content and level of that training.

By 'capacity (or supply) of clinical placements' we mean the overall magnitude of the range of variables that contribute to clinical training experience that is provided by the health service (broadly defined). These include the number of students to be placed, the duration of that training, the number of hours/ days, the distribution of those hours across the week/month/year, the supervision requirements including hours and ratio, the location of the training and of course the content and level of that training.

It is widely acknowledged that there is a significant gap in the knowledge of current clinical training load, its distribution, and any under-utilised capacity. The lack of adequate clinical placement data has impeded a more detailed analysis of issues and opportunities in relation to quality, efficiency, effectiveness, organisation, governance, funding and innovation.

A national approach

The Productivity Commission in its study into the heath workforce noted that there was a dearth of accurate, consolidated information on such things as available clinical training capacity (professional and site) and the numbers of undergraduate and graduate students seeking clinical placements and that, whilst local and

jurisdictional initiatives to map these things were supported it was concerned that such things needed to occur within an overarching framework reflecting national goals and priorities and that it saw the need for

> *"a coordinated and 'whole-of-workforce', national approach to improving the clinical training information base".*[1]

Given the inherent complexity of the environment, with 38 universities and 339 Registered Training Providers which may operate across jurisdictions, and hundreds of health services where placements do or may occur, there is strong argument for considering what collection and analysis of this information at the national level is necessary.

Arguments to support collection of data at the national level include:

- A number of clinical placement challenges extend across jurisdictions, or are common to all jurisdictions
- Smaller jurisdictions will need to rely on larger ones to support clinical training of their students
- There may be efficiencies or synergies in developing nationally consistent solutions, rather than each jurisdiction tackling the same issues
- National approaches could support an overall strategic direction, rather than a proliferation of potentially competing approaches at the local, regional or jurisdictional level

At a national level, the information collected would inform planning for overall system capacity and identify activity and its distribution. Importantly, it would form the basis for dialogue between the health and education minsters at the national level on the need for additional undergraduate places and the ability of the health system to support those places.

Previous work

The research in the data, organisation and capacity stream of NHWT's clinical training project was initially undertaken in partnership with Universities Australia (UA) through consultation with its health workforce working group (UAHWWG). A survey was conducted of all universities in Australia from December 2007 through to March 2008 requesting detailed information about the organisation and costs of clinical placements. Due to poor response rates, this approach was not successful in producing a data set that could be purposefully used for analysing the supply of or demand for clinical placements. Further attempts were made by UA to obtain the necessary data but the lack of centralised collection systems that could retrieve and assemble the data in some universities, and/or insufficient resources or infrastructure to meet the request for data provision resulted in the provision of only partial only and limited data.

Previous experiences would suggest that, at both the national and jurisdictional level, there has been very low compliance to such data collections from either education or health services providers due to perceived lack of value or relevance. The benefits of a data collection will vary according to different stakeholders across the system. Establishing a national data set would require that elements be identified across the local, jurisdictional and national levels. It is important to identify elements required by each of these levels to ensure that the appropriate information, planning and reporting needs are addressed. The current post hoc collection processes that are in use do not capture key data in a way that can effectively inform, or anticipate, the planning of capacity and coordination/matching of placements for any stakeholders.

In order to establish the feasibility of assembling a national data set on clinical training demand, activity and capacity, there is a need for discussion as to what value such a collection would contribute to ongoing planning and coordination of clinical placements, and what resources are required to meet both quantum and distribution needs for each health profession.

Benchmarks would need to be identified as to what constitutes a reasonable comparison of either the capacity of health service providers or the requirements of education providers for clinical placements. Developing indicators of capacity may provide the basis for ongoing dialogue about how either gaps or overlaps in the system can be optimally managed.

The development of a data collection process and data base would need to:

- Ensure data integrity through secure collection

[1] Productivity Commission Australia's Health Workforce 2006 p 100

- Ensure data is fit for purpose;
- Inform planning
- Not create unnecessary administrative burden.

Moving towards a data collection that achieves this raises a number of questions as to what is needed - for what purpose and how might it be structured to meet requirements of the range of stakeholders involved.

There would be opportunities to explore whether there are data elements required by some stakeholders that, if included, would increase the likelihood of compliance. As part of the project it is important to identify what might be incentives or disincentives to the successful implementation.

3 Available data and data collection systems

The Higher Education Group of DEEWR, with the assistance of the Australian Bureau of Statistics is responsible for the collection and dissemination of statistics relating to the provision of higher education in all Australian universities. Data included in the higher education statistics collection include:

- Courses conducted by higher education institutions
- Numbers and characteristics of students undertaking courses
- Student load
- Completion of units of study and courses.

These data are collected on a yearly basis but do not currently provide information on clinical training requirements, activity or capacity. Whilst DEEWR can provide some relevant data, they are not adequate to inform the trends or pipeline effects of demand or the capacity issues at a national level.

Various education providers and jurisdictions have developed or adopted systems that assist them to coordinate, manage or account for their placement activity. There is, however, no current mechanism for collection of capacity information in health services.

As outlined earlier, the most recent attempt to survey clinical placements was conducted by UA in late 2007 and 2008. It undertook data collection from education providers of courses in medicine, nursing, dietetics, podiatry, clinical psychology and physiotherapy. The methodology was via distribution of a questionnaire, querying:

- Students, placement numbers and clinical training requirements by institution and department
- Placement providers
- Fees and charges for providing clinical training and supervision
- Other questions relating to direct financial aid and financial assistance to students.

Due to the lack of response to the initial survey, UA repeated it in early March 2008. These data were provided to the NHWT, but have not been sufficient for any substantial analysis as they do not provide complete sets across any health discipline. Without a complete set of data, the information that can be ascertained is very limited.

The Medical Training Review Panel (MTRP) Clinical Training Sub Committee undertook a review of undergraduate medical clinical training in 2007 for the Commonwealth Government's Department of Health and Ageing. The review was a one-off exercise and as such it is not useful to compare it with data collections or clinical placement systems summarised in this paper. It does, however, provide useful insights into issues to consider for planning clinical training in the future.

The review methodology comprised data gathering and consultation with stakeholders. The following data was collected:

- First-year enrolments 2000-2010 (Medical Deans' student statistics)
- Graduates 2002-2012 (Medical Deans' student statistics)
- 2007 clinical rotation sites and places by medical school (university medical schools)

The information presented on clinical rotation sites and places includes data for each medical school including clinical training sites, the year group of students placed, the rotations undertaken and their duration (hours/week and weeks/year). This information has not been available at a national level previously, and it serves as an indicator only of the quantity of clinical placements undertaken in 2007.

It appears that the available data that may inform an understanding of the national supply of and demand for clinical placement does not currently exist in any specific system. Establishing a data set for clinical training and placement that can be interrogated for planning purposes is viewed as critical, particularly when governments are considering potential increases in undergraduate places. A national data collection that quantifies demand for, and supply of, clinical training places may support all levels of government, education providers, and health services in improving the planning, funding and organisation of clinical placements.

All parties will need to be involved in the development and implementation of such a process. Some jurisdictions have invested resources in developing and enabling monitoring of their clinical placement activity, whilst others are more reliant on long-standing, less formal mutual arrangements between education providers and health services. The range of approaches across jurisdictions is outlined below and a discussion follows as to the potential for any of these systems to be incorporated into a national approach. The investment and level of commitment to existing solutions is not known, and would need to be canvassed when identifying barriers experienced by jurisdictions in subsequent discussions.

State collection systems

Australian Capital Territory

A Training Management System (TMS) for ACT Health is currently being developed to assist with data collection and reporting. Amongst a range of core functions, the system will also provide the capacity to manage and evaluate clinical placements of students.

New South Wales

NSW Health's Nursing and Midwifery Office has implemented the Clinical Placement Capacity Information System (CPCIS) in 2008. This is a web-based system designed to assist Area Health Service (AHS) users to streamline clinical placement management in the public health system for all nursing and midwifery students. Training providers with placement agreements with AHS can access placement reports for 2008 via CPCIS, and the next stage of development will include an online request function for training providers.

Suites of reports will show the supply (ward capacity) for clinical placements and the allocated/approved placements. Broadly, the purpose of CPCIS is to ascertain the capacity of the NSW public system to accommodate higher education and vocational education and training nursing and midwifery students, obtain clinical placement allocation data, ascertain training requirements for clinical placements and identify gaps between supply and demand.

Northern Territory

According to the Northern Territory Department of Health and Families, clinical placements for nursing are coordinated by Charles Darwin University through a comprehensive student placement system which has been designed to interface with and automatically update its student administration system. The NT does not have a coordinated system for managing medical clinical placements.

Queensland

Arrangements for clinical training for medical trainees in Queensland are currently made between individual education and health organisations. The data are therefore distributed and decentralised. However, a recently let consultancy is developing a database of clinical training demand and supply, which will be complemented by qualitative information on the barriers to efficient placements, opportunities to standardise curriculum and clinical placements and opportunities to expand capacity. A comparable consultancy has been commissioned for a best practice model for nursing and midwifery clinical training with a management system that matches demand to supply.

South Australia

There is limited information on data collections or clinical placement systems used statewide in South Australia, however, some mapping by the Department of Health of specific health professions with clinical placement requirements to inform planning and coordination resulting in identifying potential capacity has been conducted.

Tasmania

Tasmania's Student Placement Management System (SPMS) services Tasmania's only university, the University of Tasmania (UTas). Implemented in 2006 by UTas and the Tasmanian Department of Health and Human Services, SPMS was designed to be a corporate communication and clinical placement management tool, for use across health disciplines.

SPMS imports information (student photographs, contact details, course and unit codes and names) from two other UTas student management systems. UTas administration officers then enter the following details into SPMS: name, contact details and units for a placement provider; rotation; placement block; start and end dates; the number of places available at placement providers; time slots for activities within the placement period such as appointments, lectures, tutorials and meetings; and student allocation to a placement provider. UTas staff can allocate students to places in Tasmania, other states and other countries via SPMS. UTas can also permit a student to apply for a place by region only, or by organisation within a region (in each case a maximum number of preferences is set), ask for a change or negotiate one with another student.

When the allocations have been finalised, students are notified by email (from within the system) and can log in to see their placements, and placement providers can log in to see names and photographs of students and placement details. Clinical supervisors can access SPMS for basic information about placements and to communicate with UTas academic and administrative staff.

Students expected to continue in their courses in the following year can be both provisionally enrolled and provisionally placed, providing stakeholders with an indication of the number and distribution of students in the next twelve month cycle.

Victoria

Primarily for payment purposes, the Victorian Department of Human Services (DHS) annually surveys all universities (at both under and postgraduate levels) that place students in Victorian health services. For the 2007 academic year, there was full compliance from universities, and public acute health services were also involved in the validation of university data. However, the default position allowed for a lack of response from health services to register as acceptance of university reporting.

The annual survey involves entering data into an online application called the Student/Trainee Reporting Tool (STaRT), which is also used to collect other health workforce data, including the Medical Workforce Survey and the Allied Health Early Graduate Survey. Universities report on the total number of clinical placement days per course per health service, including in non-acute settings. This provides DHS with a near-complete picture of clinical placement activity in Victorian health services.

For the previous academic year, university users select the relevant course at their campus (e.g., Bachelor of Social Work), placement type (e.g., community development, fieldwork, etc.), year level (e.g., first-year student), health service type (e.g., public health service), health service (e.g., Northern Hospital), total students and placement days. Once universities have entered their data, health services are asked to enter the system to validate the university data. Once all data are validated, an annual grant is released to health services based on a daily rate per student.

While up to now STaRT has been used to capture data ex post facto, it could also be used by education providers to project future activity rather than just report on past activity. STaRT is not currently used to manage placement of individual students; it is an aggregated reporting tool.

Western Australia

Western Australia (WA) has established a Health Education and Training Taskforce (HETT) (endorsed by the WA Minister for Health and Minister for Education and Training) to determine current demand for clinical placements in health-related higher education courses in Western Australia, and the capacity of health services to meet these requirements. There is no formal system at this time.

Examples of other systems

School of Nursing Innovative Allocation System

The School of Nursing Innovative Allocation system (SONIA) is a commercial, clinical placement management system at the local level. The system is used by education providers, health services and students. Health services' organisational details are provided to the system and education providers enter their students that require placements into SONIA. Health services can then accept or reject requests from within SONIA over the web. SONIA also allows students to select placement preferences, which must comply with the academic requirements of the relevant course.

Several education providers in Australia use this commercial clinical placement system, originally developed for the University of South Australia's School of Nursing. Planet Software owns SONIA, which is currently being used by fourteen education providers: Central Queensland University; Curtin University of Technology; Edith Cowan University; Griffith University; Murdoch University; RMIT University; Southern Cross University; TAFE WA; the University of Newcastle; the University of South Australia; the University of Southern Queensland; the University of Sydney; the University of Technology, Sydney; and the University of the Sunshine Coast. Singapore University is also currently using SONIA.

British Columbia, Canada

The Health Sciences Placement Network of British Columbia (HSPnet) was launched in April 2003 by the British Columbia Academic Health Council to provide a province-wide system for coordinating the placement of health sciences students on clinical placement. Since then it claims that over 100,000 placement requests have been managed through HSPnet, with over 40,000 requests in the British Columbia database alone. Placement data in HSPnet represents a wide range of disciplines, providing a comprehensive dataset to address needs such as building placement capacity, understanding acceptance/decline rates and reasons, developing interprofessional opportunities, and studying placement activity levels and trends. HSPnet users report a high level of satisfaction with system functionality, and benefit from reduced duplication, streamlined communications, and improved information sharing.

HSPnet provides a web-enabled database and tools that support the following practice education objectives:

- Increased availability and quality of practice education opportunities
- Streamlined processes and improved coordination
- Enhanced access to untapped opportunities and a greater range of placement settings
- Evaluation and improvement of learner and agency outcomes
- Enhanced profile and priority of practice education

The system involves education providers and health service organisations. It enables participating agencies to:

- Maintain student, instructor, subject/course information for placing agencies
- Maintain site, service, destination, supervisor/preceptor information for receiving agencies
- Initiate, send and redirect placement requests
- Monitor status of placement requests
- Analyse and report on placement activities and outcomes

Custom reports are produced on a regular basis to support organisations or task groups that are reviewing specific placement capacity issues.

The governance body for this network is the National HSPnet Partnership and it ensures that HSPnet is equitably accessible and affordable for small agencies, and that the initial British Columbia public funds invested is being leveraged to ensure ongoing cost-effectiveness and continuous improvement at a declining cost over time.

The scope of the HSPnet system is wider than the placement systems used in Australia. Specifically, enhancing access to untapped opportunities and developing reports to support review of specific placement capacity issues go beyond placing students within Canada's current structures.

California, United States

The Centralised Clinical Placement System (CCPS) is a web-based tool designed to help address and improve the growing nursing shortage problem in the US state of California. According to the current information on its website, CCPS is used in the San Francisco Bay area, although its capability to operate across jurisdictions in a national system is not known.

CCPS is used for nursing clinical training only and brings together nursing school and health service information in a centralised, online format. This enables nursing schools to match clinical placement opportunities for student cohorts (groups of 8-10 students), and health services can manage a single schedule for all participating schools while increasing the number of students within their health service.

There are few distinctive differences between the systems, with SPMS having a higher level of reporting and placement functionality. As indicated earlier, the core functions are compared across the three systems and represented in the table below.

4 Feasibility of a national clinical placement data collection

The need to collect information on clinical placement activity, demand and capacity is well established, however, given the size and complexity of the current situation across Australia, a national or nationally consistent approach needs to ensure it provides relevant and timely benefit to those providing the data. As indicated earlier, national information requests to universities and health services have generally had poor return rates. The systems that appear to be most appropriate either use funding as an incentive or support the actual work of finding and managing placements for users. Poor compliance is often experienced in systems where the data input is not perceived to have a tangible or timely benefit for the system user.

Any approach would need to demonstrate that it could:

- Establish information for analysis of clinical placements for jurisdictions, education providers and health services using standard analysis tools such as stocks and flows or trend and impact.
- Provide a basis for dialogue about measuring capacity availability compared to demand according to a range of factors (e.g. timing, duration, and purpose within and across jurisdictions).
- Provide a basis for dialogue about comparability: what are the benchmarks by which to measure a health service's capacity (size, service profile, service costs/benefits) to provide specific types of placements (efficiency and effectiveness measures to be considered).
- Facilitate the matching on demand for places with the available supply.
- Provide information for planning both within jurisdictions as well as across jurisdictions
- Be based on a set of principles to ensure jurisdictional interests including access, equity across disparate locations (regional, remote, etc)

Developing a national data collection based on retrospective information increases the risk of not being timely or tangible in benefit. The process needs to be well planned and build on existing systems. In developing a national system and a minimum data set (MDS) for annual collection from education providers and health services, the capability of existing systems would need to be more thoroughly assessed.

The primary outcome of establishing a national clinical placement data collection would increase quality, effectiveness, efficiency and transparency at each level and for each stakeholder.

Information and planning needs

National

At a national level, the information collected that would inform planning would include the capability to aggregate the numbers required, identify activity and its distribution and identify capacity. Over time, this would enable clearer identification of clinical placement and health service delivery trends and could influence educational program development and curriculum design. This information would guide the development of consistent policy and be able to focus on clinical placement based on issues that impact across professions, jurisdictions, education providers and health services.

It would also provide valuable activity and capacity data that would feed into policy-making processes, specifically informing views around accreditation requirements and training and workforce issues in rural and non-acute settings. The benefits of a robust national collection would be significant.

Jurisdictions

For jurisdictions, there are some clear benefits for an improved level of transparency in the organisation of clinical placements through standardised data collection processes and systems. This would enable implementation or improvement strategies to consider quality or access issues at this level and build local knowledge about system performance and capacity and utilise the data through reporting mechanisms to inform payment and quality assurance systems.

This would provide numbers required, level of activity, planned distribution, and system capacity and where possible, the validation of the take-up of clinical placements for funding purposes through streamlined administrative processes between education providers and health services.

The availability of information over time will contribute to dialogue with local education providers and health services about performance benchmarks, and assist in strategic planning that increases awareness of collaborative and cross-system opportunities.

Education providers

Collecting data for national or jurisdictional planning purposes would have limited benefit for individual education providers. The key need is to be better informed about availability of clinical placements, where they are located, what range and type of placement, scheduling and duration. This would alleviate a considerable amount of administrative burden that universities have had to resource to facilitate clinical placements.

Having access to the range of placement options would need to include data elements such as service type, setting, location, timing, supervisor/student ratios and placement types. It would benefit if this information was across health disciplines for the education provider as the majority provide more than one discipline in health education.

Through identified capacity a range of risk factors would be minimised for those coordinating clinical placement and training, particularly risk to key relationships with health services in jointly managing and monitoring the planned capacity.

A national collection would also assist in identifying extraneous clinical placement requirements or the oversubscription for placements practised by some universities. Given the increase governments have proposed for health education places, this will not be a tenable practice in the near future, as health services become an increasingly in demand. A more independent process may assist in the decisions about capacity, demand and costs.

Health services

The overwhelming concern expressed by health services relates to the internal capacity to provide and organise clinical placements that meet expectations of the university, student and jurisdiction. The range of tools to assist in the planning and organisation varies, as does the level of experience within health services to manage and coordinate the expectations. This primary benefit for many health services would be the reduction of administrative burden and reactive planning involved in the current system.

If health services could access data about the level of demand and the specific requirements of type; quantum, education level, supervisor/student ratios and duration and timing this would inform decision making and commitment of resources more effectively.

Many health services have developed internal infrastructure to plan, monitor and manage placement activity but this information is not captured externally to any significance. The capacity of such internal systems is unknown, and would need to be investigated to assess data transfer and reporting potential.

The support tools that are being adopted as enablers include types of relationship agreement templates and standard guidelines to support clinical placement policies and management processes. The availability of a national data collection that provided reliable data could in turn support negotiations between funders and health services within these agreements.

Improved data could lead to developing better tracking systems that informed practice and protocol development, again reducing the administrative burden to manage wide ranging expectations and minimise multiple discrete arrangements.

Students

Establishing a national data collection that provides the opportunities described above would in turn benefit students through consistent placement standards and clearly stated expectations in order to understand accreditation and university requirements. Students could expect to have access to better quality of information to be well informed about options for clinical placement and training. Improved data collection could particularly impact on the progress in developing competency standards across health professions, the

need for greater transparency for students as to relevance, quality and cost; and the mounting pressure of the need for increased quantum of placements in the future are all factors on which an improved data collection could positively impact.

Key data elements

The two key areas to investigate are supply (from health services) and demand (by education providers) of clinical placements. On the demand side, education providers would be required to provide specific data to most effectively understand the requirements.

Source of data provided		Data elements required in a national minimum data set	National	Jurisdictions	Education Providers	Health Services
	Education Providers	Course	◇	◇	◇	◇
		Academic year	◇	◇	◇	◇
		Student year	◇	◇	◇	◇
		Placement type	◇	◇	◇	◇
		Aggregate number of students and student days per placement	◇	◇	◇	◇
		Required commencement & end dates per placement	◇	◇	◇	◇
		Supervisor/student ratio	◇	◇	◇	◇
	Health services	Health service type	◇	◇	◇	
		Service setting	◇	◇	◇	
		Site	◇	◇	◇	
		Potential commencement & end dates per placement	◇	◇		◇
		Potential supervisor/student ratio	◇	◇		◇
		Potential capacity of numbers of students and student days per placement	◇	◇		◇
		Placement type	◇		◇	
	Future Items	Actual against proposed: aggregate numbers of students and student days, placement type, setting and location	◇	◇	◇	◇
		Availability of multidisciplinary model placement	◇	◇	◇	◇

NB Diamond symbol represents each level's interest in the data element

Capturing demand

The need to fully capture timing, type, numbers, and supervision arrangements for placements is often difficult in the processes of organising placements. The demand may also be subject to change through student preference or course prerequisite requirements.

As a result the initial elements of data that would be required for a national minimum data set to identify current activity and, at a minimum, provide a basis for system capacity would be:

- education provider
- course
- academic year
- student year
- number of students per placement
- number of student days per placement
- start and end dates of each placement
- supervisor to student ratio
- health service type and setting
- placement type
- location

Discussion questions

- Are there other data elements needing to be captured to map demand?
- Can education providers provide the necessary data elements?
- Would existing data collections provide this information and enable comparisons across the sector?

Capturing supply and capacity

'Supply' refers to the health system's actual activity and capacity to take on or 'supply' placements to additional students. From the education provider/jurisdictional demand data, it will be possible to ascertain the planned requirements for clinical placements; however, understanding overall supply would include identifying potential capacity, which is needed to make optimal use of clinical placements in the system.

Improved coordination and planning will optimise the use of overall capacity. It is possible for a brokerage system to exist where at the national level a coordinating body, possibly a clinical placement agency, would negotiate between the jurisdictions for placements. For example, where supply data demonstrated a dearth in one jurisdiction, negotiations with a jurisdiction which has additional capacity to its needs to secure clinical placements could be undertaken.

In order to improve planning for clinical training activity, further information is required to identify any under-utilised capacity within health services across a range of settings. There are a range of indicators that could be considered to measure capacity. It will be dependent on what are the critical elements and their inter-relationship, as well as their relevance to the stakeholder. For instance, incorporating weighted formulae that are already in use by jurisdictions to benchmark providers such as degrees of complexity, remoteness, and staffing ratios may assist in developing indicators that identify comparability between health service providers in their clinical placement capacity. This would assist in planning and coordinating numbers, timing and purpose of placements over time.

Discussion questions

- How can additional capacity be quantified and what specific metrics could be applied?
- Who can provide this level of data?
- What are strategies for identifying potential capacity?
- What is the capability of health service providers to provide data that might be necessary?
- How would data integrity and quality be assured?
- How would capacity be benchmarked?
- What are the potential benefits and challenges of identifying benchmark measures?

Options for a national approach

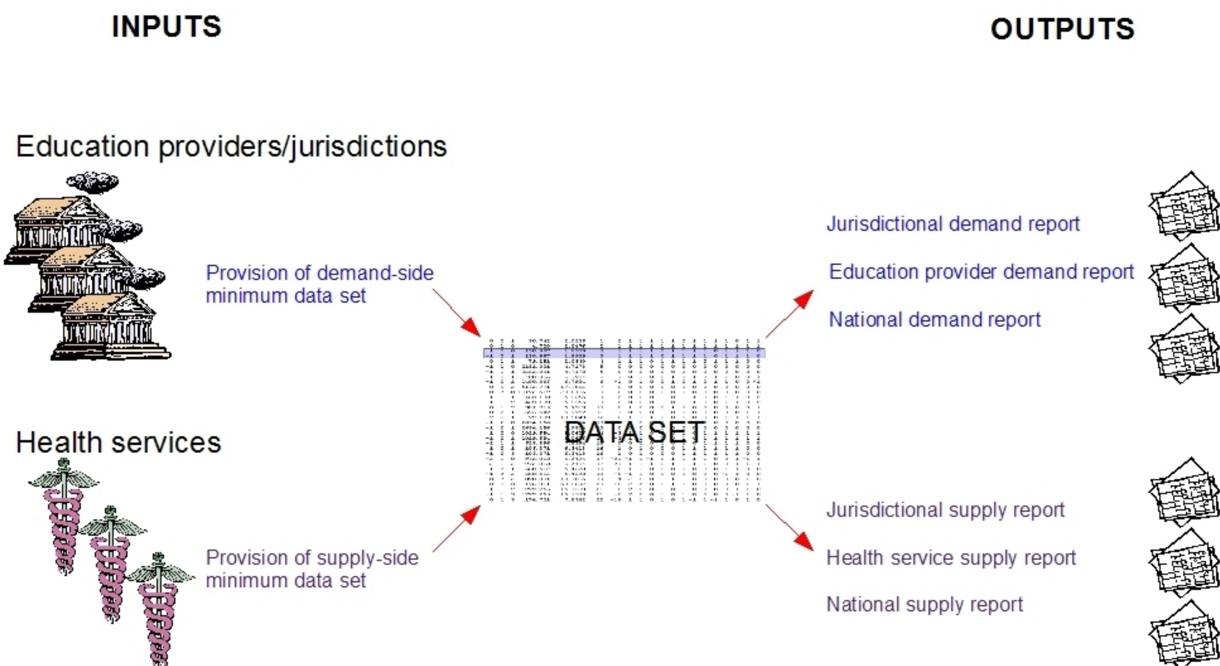
The critical success factors for a national approach are expected to include the following:

- All parties will need to be involved in the development and implementation
- Identify the data elements required at local, jurisdictional and national levels for their specific operational, planning and reporting purposes
- Builds on existing systems

- Timely and comprehensive compliance – may require a link to funding on a transparent and rational basis
- Ensure data integrity through secure collection
- Does not create unnecessary administrative burden
- Applies across occupations
- Based on an acceptable set of principles, including data sharing between local and jurisdictional data collection capacity and the national clinical training data system.
- 'Fit for purpose' has to apply at the local and jurisdictional level as well as the national level.
- Work with existing relationships between health and education facilities, to strengthen their ability to expand capacity

Data inputs and outputs

In a comprehensive data collection approach that included some form of clinical placement management it would be expected that the system output would meet both policy and planning requirements as well as local needs in managing clinical placements.



Considering the varying needs of all stakeholders presents two options for effective collection of data on clinical placement demand, activity and capacity. A combination or a mid point between the two approaches may also be possible:

A comprehensive approach

A clinical placement management system that addresses the data needs as described at all levels, demonstrates 'best fit for purpose', provides information to all stakeholders and supports the specific needs of placing and receiving organisations.

This approach would mean the development either nationally or locally of on-line clinical placement management systems that would support education providers, health services and students in the operation of clinical placements. Such a system could be either developed as a national on-line approach or,

alternatively, developed as a software package for local deployment with the capacity to provide data into a national information dataset. Ideally, to be of most benefit to users such a system would need to be able to:

- Maintain student, instructor, subject/course information for placing agencies
- Maintain site, service, destination, supervisor/preceptor information for receiving agencies
- Initiate, send and redirect placement requests
- Monitor status of placement requests
- Analyse and report on placement activities and outcomes
- Facilitate demand management and provide evidence of challenges to be resolved.

Activity, supply, demand and planning data could be collected from the system as a by product of its managing placement activity functions.

Developing a system or systems that could be applied across Australia would be complex, although the experience in British Columbia and smaller system developments in Australia suggest it could be feasible to either build on existing systems or develop one to meet specific needs. Such an approach would require the establishment of some type of coordinating body to oversee system development and management and funding from governments.

A minimalist approach

A minimum data set based on agreed data needs and working with the capability of individual systems, accept the type and level of information provided by jurisdictions, education providers and health services.

This approach would require the least level of change to existing arrangements. The minimum data set could be required to be delivered at agreed key points in the placement year, with education providers and health services continuing to operate their existing systems and processes.

This, however, would not address the likely poor compliance rate and high error rate. Given the lack of current collection systems and views of education providers and health services that they do not have sufficient resources or infrastructure to provide the data, a minimum data set approach is unlikely to be successful unless some incentives were provided to support it and education providers and health services were convinced of its value or relevance.

Compiling data from numerous and diverse sources is likely to have high error rates. In addition it would continue to be a post hoc collection which would not capture key data in a way that can effectively inform, or anticipate, the planning of capacity and coordination/matching of placements for any stakeholders.

Data definition issues and the need for a standard approach would render it very difficult to integrate existing data collections. This may require jurisdictions, health services and education facilities to abandon their current approach to managing their data.

Discussion questions

- What is the most feasible, relevant and beneficial approach for each stakeholder?
- Is there interest in developing a national approach and could this be achieved through capturing data from existing systems and collections or would new systems need to be developed?
- Would a preferred model be one that progresses an active clinical placement management systems that provide planning data as a by product or should it be one that focuses’ on only collecting data?
- What incentives would ensure a high level of compliance?
- What might be barriers to achieving a high level of compliance?
- What is non negotiable at the local, jurisdictional and national levels to ensure improved data for planning placements and identifying capacity?

Next steps

The NHWT invites you to make a submission and/or attend a round table to discuss the issues raised in the paper.

Guidelines for making a submission are available at http://www.nhwt.gov.au/nhwt.asp. Please format your submission around the discussion questions and email it to taskforce@nhwt.gov.au by 30 January 2009.

The NHWT plans to hold up to 5 roundtables to discuss the issues raised in the Discussion Paper. However, the final decision as to whether to hold any or all of the roundtables will depend on the level of interest registered in the specific roundtables at the following locations and dates.

Brisbane	19th January
Sydney	20th January
Melbourne	21sr January
Adelaide	22nd January
Perth.	23rd January

Registration of interest in attending the roundtables can be made at http://www.nhwt.gov.au/nhwt.asp

Appendix 1: Explanatory notes for estimating clinical placements days

The numbers of total clinical training hours by course and by year in each course are not nationally available for nursing, medicine and the allied health professions. The NHWT has sought information to confirm clinical training requirements through an initial request of jurisdictions, specific information from education providers through Universities Australia, public information about relevant courses and advice from accreditation bodies.

Not only are the accreditation standards for clinical training in many cases not specific, where information is available on clinical training hours for courses, there is a significant variation across all universities in the actual hours required for each course. Given this large variation, the gaps in the information available and, as it is impossible to project which individual university might deliver any additional places, the NHWT has derived clinical training hours per year per course through an averaging process or, where possible, drawn on actual figures as provided. In some instances an individual university has been used as a sample education provider and starting point. All figures therefore are notional.

The calculation for the training requirements has been estimated in training hours and rounded up to training days. It is acknowledged that there is no standard training day, however, for this exercise clinical training hours have been averaged as seven hours per day across all health professions to produce an equivalent, except for medicine which is calculated as an eight hour day.

The calculation of clinical training requirements for each health profession has been limited in its accuracy and possible relevance given the lack of specific or standardised information. For some professions, the clinical training requirement is clearly and precisely stated in quantum and timing whereas for others, it is competency based and/or may be left unspecified in its timing. Where the information is not comprehensive or detailed, individual university courses have been used to assume a starting point for calculation. For some health professions there are a range of courses of variable duration.

Detail as to how clinical training requirements for each professional group have been derived is provided below.

Medicine

The AMC describes the clinical training required for medical education as follows (Assessment and Accreditation of Medical Schools: Standards and Procedures, AMC, Canberra 2002 and revised accreditation standards which were in effect as of 1 January 2007):

> *Standard 3.2 Clinical sciences and skills is an essential component of any curriculum, and a significant period of time is devoted to students' personal contact with patients. This would normally entail the equivalent of at least two years spent primarily in direct contact with patients, as well as personal contact with patients during other parts of the course.*

The above standard has been calculated as 2880 hours at four or more weeks in duration. This was computed based on 40 hours x 9 weeks/rotation x 4 week/rotations x 2 years (Human Capital Alliance for Victorian Department of Human Services, Accreditation requirements for clinical placements, July 2005).

Medical Deans, through the MTRP Clinical Training Sub committee, have undertaken a project to gather data on clinical education and training requirements. The Draft Report of Medical Deans does not identify the total number of hours required per year of a medicine course. The Medical Deans Report found that clinical training in the early years is often conducted in groups and sessions are of a short duration and that full-time clinical rotations are normally undertaken during the final two years of medical programs. The length of rotations varies between schools and disciplines, usually four, six or eight weeks.

Further information is required in order to develop sound averages of clinical training hours required per year of a medicine course. The information available does indicate that (as identified in the Medical Deans Report) full time clinical rotations are usually undertaken during the final two years of a course. Some clinical training is undertaken during earlier years of a course. The average has been calculated using as 4 year course by taking an average of the total hours required by those courses where data was available. Further, the average split of those hours per year of course has been calculated on a national basis.

Registered nurses

The numbers of total clinical training hours by course and by years in each course are not nationally available for nursing. Contact was made with jurisdictions and with some registration boards to seek advice on the average number of total hours in each jurisdiction and by institution where that was possible. The approach used was to average the clinical training requirements for nursing across the three years on a 20/30/50% distribution given that advice supported the weighting towards the later years of training. Where an actual total of clinical training hours were provided and no distribution across the years of the course, this split was applied.

Dentists

There are national standards governing the clinical training requirements for each of these roles. Generally, there is minor placement time in the first two years with the final two or three years being heavily weighted towards undertaking clinical training hours. This is represented as an average amount as some universities measure through a points system and others reflect blocks. An approximate distribution commencing in second year is 12/12/26/50% with the majority being undertaken in the fourth and fifth years.

Podiatrists

The national standard is understood to be 1000 hours over the life of a course and, based on advice from universities, this is applied across the second, third and fourth years of the course.

Pharmacists

The specifications for pharmacists vary across Australia however the trend appears to be that the majority of the relevant clinical training occurs in the final two years of the course, represented as 40/60% distribution across these two years.

Physiotherapists

There appears to be no national specification for registration and the breakdown of clinical training hours across the life of the course has been based on one university. Consistent with other allied health professions, the majority of the clinical training requirement appears to occur in the final two years of the course.

Occupational Therapists

The national minimum standard of 1000 clinical training hours has been averaged as 15/15/30/40% distribution across the four years.

Speech Pathologists

The majority of clinical training is undertaken in the latter years with some focus occurring in the second year with the significant quantum being undertaken in the fourth year.

Dieticians

The national standard for professional practice or clinical training requirement is estimated to be 700 hours which is undertaken primarily in the final two years of a course. This is averaged as 350 hours per year.

Social Workers

This profession specifies 980 clinical training hours are required and these are generally undertaken in the final two years of the course, with the majority occurring in the final year.

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