QRTN
Queensland Regional Training Networks

Evaluation of a Pilot of Clinical Placement Management Systems

young futures
realising possibilities

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Evaluation team

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Limits of this work

This pilot and the associated evaluation was conducted to add to the body of knowledge regarding use of clinical placement management systems to support efficient clinical placement capacity planning for health services.

As the pilot involved use of three different systems across three quite different health service contexts incorporating a range of disciplines, the evaluation does not compare findings across clinical placement management systems or clinical contexts. Rather, the focus is on using the findings of the three pilots to identify key issues requiring consideration when exploring the possible use of a clinical placement management system.

Conflicts of interest

The evaluators of this pilot have no personal or financial conflicts of interest that have influenced the method used to undertake the evaluation or the findings presented.

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List of abbreviations

CPMS	Clinical placement management system
QRTN	Queensland Regional Training Networks
SPOT	Student Placement Online Tool

Executive summary

Introduction

Most Queensland health services have developed their own local systems to manage clinical placements. With the increasing availability of web-based systems, the Queensland Regional Training Network (QRTN) commissioned a short pilot of three clinical placement management systems (CPMSs) within three Queensland health services. The pilot asked:

1. *Does use of a clinical placement management system by a health service improve the efficiency of clinical placement management when compared to not using a clinical placement management system?*
2. *What factors should be considered when assessing the potential contribution of a clinical placement management system to optimal clinical placement management for a health service?*

Pilot findings

The efficiency of placement management using a CPMS

A CPMS *can* improve the efficiency of placement management in two key ways: a CPMS can offer ***richer reporting***, to operational staff and senior management; and a CPMS can reduce administrative overhead through the ***delegation of rostering.*** Other benefits include the direct availability of data to multiple stakeholders, real time information and rule-based automation and the potential that, as a result of better access to data, health services may be better placed to recognise their full placement capacity, and schedule placements to utilise the available capacity. As a result of project limitations, the findings did not provide adequate evidence to reach a firm conclusion regarding the *overall* impacts on efficiency from using a CPMS.

Variables health services must consider when considering a CPMS

The fit between the CPMS and the health service characteristics:

Many factors determine the effectiveness of a CPMS. Below a certain level of placement activity, a CPMS adds little value and processes may be just as efficient without a CPMS, however when placement activity reaches a critical mass, a CPMS can improve placement administration efficiency.

The fit between the CPMS and the health service placement management processes:

A CPMS must be configurable at a macro and micro level to meet local needs.

The contribution of a CPMS to supporting relationships between stakeholders:

A CPMS cannot replace the need for effective relationships between health services and education providers. A CPMS has the potential to contribute its greatest value where strong relationships exist between health services and education providers. Conversely, certain features of a CPMS can support the communication needed to develop and maintain these relationships.

The contribution of a CPMS to supporting communication between stakeholders:

CPMSs offer tools to streamline communication, but communication is most efficient where the health service and the education provider use the same CPMS.

The capacity to accommodate diverse placement models:

A CPMS needs to provide mechanisms to roster 'block' placements, variable rosters, different supervision models and placements shared across multiple organisations.

The capacity to provide required and useful information:

It is important that a CPMS efficiently collects the key data required by a health service and provides views of screens as well as reports that can be customized to individual needs.

The user friendliness of a CPMS for diverse stakeholders:

The pilot reinforced the importance of a CPMS being intuitive, forgiving, navigable, readily understood, efficient, fast, informative, and reliable. A range of variables relevant to each of these factors was considered.

Conditions for optimising the value a CPMS brings to a health service:

Achieving optimal value from a CPMS depends not just on its intrinsic features but on external factors: communication and governance arrangements; agreement on changes to deeds; successfully interfacing with other systems; and negotiations to discontinue obsolete legacy processes.

The cost-effectiveness and cost-benefit of using a CPMS:

While evaluating the cost-benefit and/or cost-effectiveness of using a CPMS was out of scope for this pilot, attention to these concepts is important when exploring any information technology infrastructure investment.

A *Checklist for Health Services Considering a CPMS* is provided at Appendix A.

Summary and conclusions

One of the key findings of the pilot was that the greatest functionality from a CPMS is currently achieved when health services and education providers use the same, interfacing system.

Queensland health services and education providers all independently determine and implement their own approach to placement management, therefore diverse arrangements and systems are in place across the State. In this context, the potential that a single CPMS may at some point be adopted by all stakeholders is unlikely.

Minimising the issues that arise from this situation is therefore important if optimal benefits are to be realised from implementing a CPMS. A number of potential approaches could be applied to address this issue, including:

- using the same CPMS across health services at a statewide level or within particular networks of services or geographic areas, and encouraging education providers to either adopt the same CPMS or develop mechanisms through which their CPMSs can communicate with the CPMS being used by health services;
- developing information technology solutions to provide bridging interfaces between CPMSs; and/or
- establishing a framework to enhance consistency of processes for statewide management of clinical placements.

Exploration of the relative merits of these approaches, individually or in combination, warrants comprehensive consideration.

CHAPTER 1 – BACKGROUND

Introduction

Over the past decade, the growth in training places and training schools for health professionals in Queensland has resulted in greatly increased demand for clinical placements from health services. The complexity of responding to this demand has also increased. A single health service might provide clinical education to a wide range of different disciplines and for any single discipline may work with different education providers across multiple regions. For some disciplines, health services will provide clinical education to students enrolled in diploma, bachelor or masters level programs.

Increasingly, both education providers and health services are looking for ways to more efficiently manage clinical placements, including mapping and managing capacity in the short and long term; supporting communication between health services, educators and students; monitoring student movements and placement progress; and reporting on both real time activity and trends over time.

For the most part, health services in Queensland are managing student clinical placements using locally developed systems combining spreadsheets, in-house databases and communication by email. However, there is now increasing availability of web based systems to support the coordination and management of clinical placements between health services and education providers.

In this context, the Queensland Regional Training Network[1] commissioned a short pilot and associated evaluation of clinical placement management systems (CPMSs) within three Queensland health services using three placement management systems.

Aim of the pilot

The aim of the pilot was to explore the questions:

1. *Does use of a clinical placement management system by a health service improve the efficiency of clinical placement management when compared to not using a clinical placement management system?*

[1] The vision of the QRTN is to increase the quality and opportunities in clinical education and training for Queensland's future health workforce. The role of QRTN is to identify, support and promote ideas, hard work and innovation on a local, regional level that, in turn, will strengthen capacity and collaboration in all sectors of health education, training and clinical supervision in Queensland.

2. *What factors should be considered when assessing the potential contribution of a clinical placement management system to optimal clinical placement management for a health service?*

Scope

This report is intended to assist health services by detailing key factors for consideration when exploring the possible role of a CPMS as a tool for supporting placement management within their local context. The pilot was not undertaken with any view to implementation of a Queensland-wide CPMS.

Although the pilot included three different CPMSs, the evaluation did not extend to comparing or articulating the relative merits of one system over another, nor to presenting findings regarding the outcomes of using each system.

Finally, undertaking a cost benefit analysis of using a CPMS was out of scope for this work.

Overview of the report

This report presents the outcomes of this work:

- Chapter 1 provides an overview of the pilot context
- Chapter 2 details the pilot method overall and in each of the pilot sites
- Chapters 3 presents the findings of the pilot against the evaluation questions, including:
    - the contribution of a CPMS to the efficiency of placement management
    - issues needing consideration when assessing the potential contribution of a CPMS
- Chapter 4 summarises the key outcomes of the pilot and highlights issues and questions requiring further exploration

CHAPTER 2 – PILOT METHOD

The evaluation method was designed to enable effective exploration of the questions:

1. *Does use of a clinical placement management system by a health service improve the efficiency of clinical placement management when compared to not using a clinical placement management system?*
2. *What factors should be considered when assessing the potential contribution of a clinical placement management system to optimal clinical placement management for a health service?*

The pilot method was designed around an overarching framework that was applied to each of the three sites. The method included:

- selection of the CPMSs, pilot sites and disciplines
- development of an evaluation framework
- collection of baseline data
- conducting the pilot
- recording of issues and insights throughout the pilot
- post-pilot online surveys of individuals who used the CPMS at each site
- post-pilot interviews and focus groups at each site
- documenting key features of each of the CPMSs
- collecting placement activity data

Variations to this overall method were applied to respond to the unique characteristics of each situation and the features of each CPMS.

Selection of CPMSs, pilot sites and disciplines

In 2013, six providers of CPMSs were surveyed to identify the features of the systems they offer. Four providers responded to the survey and were subsequently invited to respond to an expression of interest to be considered for inclusion in the pilot. Three CPMS providers responded to the expression of interest and all were ultimately involved in the pilot:

- QuantumIT (InPlace Network)
- Planet Software (Sonia Central)
- Mater Health Services (Student Placement Online Tool – SPOT)

A Placement Systems Pilot Focus Group (the Focus Group), including senior representatives from Queensland health services and vocational and tertiary education providers, was convened to advise the project team during the pilot. Given the short time frame and

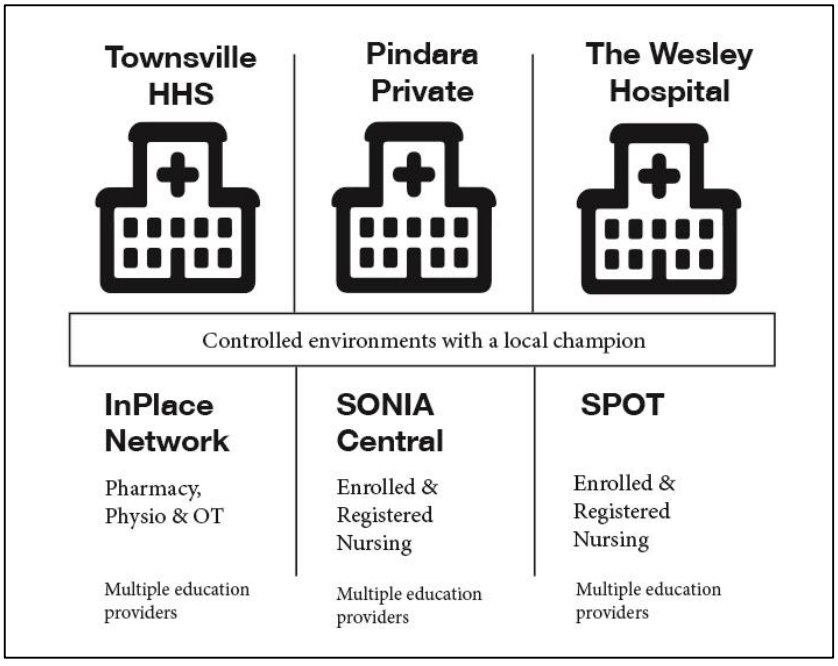
voluntary character of the pilot, the project team sought pilot sites with strong local champions. The Focus Group assisted in identifying three health services to participate in the pilot: a private health service, a private not-for-profit health service and a public health service. This included two sites in southern Queensland and one in northern Queensland. The three sites identified for inclusion were:

- Pindara Private Hospital – Gold Coast (private for-profit)
- The Wesley Hospital – Brisbane (not-for-profit)
- Townsville Hospital and Health Service – North Queensland (public)

As shown in Figure 1, each CPMS was allocated for piloting in one of the three sites. The pilot at each site focussed on clinical placements with students from different disciplines:

- InPlace Network was piloted at the Townsville Hospital and Health Service with placements for the allied health professions of occupational therapy, pharmacy and physiotherapy
- Sonia Central was piloted at Pindara Private Hospital with placements for enrolled nurses and registered nurses
- SPOT was piloted at The Wesley Hospital with placements for enrolled nurses and registered nurses

Figure 1. Participating CPMSs, health services and disciplines



Agreements were established between the QRTN and each of the placement system providers and host organisations to cover all elements of the pilot.

Development of an evaluation framework

Following a pilot commencement meeting with each site, the evaluators interviewed the pilot coordinator from each pilot site. These interviews focused on building understanding of:

- the variables of importance to a range of stakeholders within the health service
- the placement management challenges they would hope such a system might contribute to addressing
- the goals it might support them to achieve

The information from each of these interviews was integrated with findings from selected evaluations of CPMSs completed by other jurisdictions.

The evaluation framework that was developed focused on appraising four areas:

1. the key ***features*** of each CPMS
2. the ***user experience*** of working with a CPMS
3. the ***impacts*** arising from managing clinical placements using a CPMS (within the life of the pilot)
4. the perceptions of the potential longer term ***outcomes*** for clinical placement capacity using a CPMS

The evaluation framework is presented in Appendix B.

Collection of baseline data

The evaluation framework was used to inform the design of a questionnaire to capture baseline data from each of the three health services. To support comparability of baseline data with the pilot data, sites were asked to provide baseline data from a period in 2013 or first semester 2014 that corresponded most closely with the period of the pilot period.

Given the involvement of three different disciplines in the pilot at The Townsville Hospital and Health Service, a set of baseline data was sought from each discipline.

The Wesley Hospital and Pindara Private Hospital each provided a single set of baseline data.

The questionnaire used to collect baseline data is presented in Appendix C.

Conducting the pilot

Prior to commencing the pilot, an inception meeting was held at each pilot site. At a minimum, this meeting included the project manager from the Queensland Regional Training Network, the pilot coordinator from the health service, the independent evaluators, and a representative from the software developers. Either prior to, or at this meeting, the software developer provided a demonstration of the features and functions of the system being piloted.

The commencement date for the pilot varied from one site to another depending on local circumstances. The first pilot site commenced on 4 August 2014. All pilots were required to have completed their use of the CPMS by 31 October 2014.

Each of the CPMS providers assisted the relevant pilot site by working with them to train relevant staff in using the system and to configure the system to be most useful for their context and needs. The aim was for each site to have the opportunity to use the features of the placement system to the greatest extent possible and for the longest period possible within the project timeframe.

The software developers were available to the health services on an as-needed basis for the duration of the pilot.

Teleconferences were held with each site at appropriate intervals across the duration of the pilot. The project manager from the Queensland Regional Training Network chaired these meetings and acted as the key point of communication between the contributors to the pilot.

The specific details of how the pilot was implemented at each site are presented below. These methodologies are best read in conjunction with Appendices D, E, and F which describe the key features of the each of the CPMSs used in the pilot.

Using SPOT at The Wesley Hospital

The Wesley Hospital piloted SPOT, developed by Mater Health Services, with nursing placements.

At commencement, Mater Health Services provided an introduction to SPOT to the Clinical Facilitation Coordinator and three Clinical Facilitators. These staff supported others in developing their ability to use SPOT. The Mater Health Service used a coaching approach to support The Wesley Hospital across the life of the trial.

The pilot occurred over a 13 week period. During this time the Clinical Facilitation Coordinator, Clinical Facilitators, Clinical Managers, nurse preceptors and students used the system.

Although definition of placement capacity, placement requests and acceptance, and allocation of students had occurred prior to the pilot, The Wesley Hospital encouraged education providers to contribute to the pilot by entering placement requests using SPOT. A number of academic facilities contributed in this way. For others, The Wesley Hospital played the role of 'Education Provider' in SPOT and entered the relevant data.

During the pilot SPOT was used for:

- requesting placements (education providers)
- accepting placement requests (The Wesley Hospital)

- allocating students to placements (education providers)
- rostering students to block placements (The Wesley Hospital)
- rostering and managing shifts for placements with variable rosters (students)
- complete feedback forms (nurse preceptors and students)
- informing Clinical Managers and nurses preceptors of student rosters
- monitoring student attendance
- reporting on a diverse range of clinical placement variables

Towards the end of the pilot The Wesley Hospital commenced using SPOT to work with universities to plan placements for the 2015 academic year.

The Wesley Hospital and Mater Health Services remained in close contact during the pilot. The Mater Health Services assisted with resolving help requests, configuration issues, and developing new reports.

Using InPlace Network at Townsville Hospital and Health Service

At the Townsville Hospital and Health Service, three allied health professions (pharmacy, occupational therapy and physiotherapy) piloted InPlace Network, developed by Quantum IT.

The first phase of the pilot involved Quantum IT:

- training the local pilot coordinator and the Clinical Placement Coordinators of the three disciplines in the use of the CPMS
- working with the pilot participants to set up and configure the system to the needs of the participating disciplines

Given the limited time available to negotiate and implement consent arrangements for exchange of information between InPlace (used by a key education provider) and InPlace Network (being used by the Townsville Hospital and Health Service), it was decided that, as an alternative approach to experiencing the system's features, the three Clinical Placement Coordinators involved in the pilot would conduct the pilot as a simulation, including the use of simulated data.

Two of the placement coordinators each established two logins for themselves – one as an education provider in order to request placements, and one in their actual role within the health service. The placement coordinators used these two logins in order to request placements (from the education provider login), to accept requests (from the health service login), to allocate students (from the education provider login) and to assign students to specific areas, rosters and supervisors (from the health service login).

The third placement coordinator carried out a similar process sitting directly alongside their education provider counterpart, with each party carrying out the elements of the process relevant to their role.

Due to time constraints, the functions of monitoring student attendance, developing and using survey tools, and reporting were not used during the pilot.

Quantum IT was available to the Townsville Hospital and Health Service throughout the pilot to resolve help requests and configuration issues, and assist with any issues that arose.

Using Sonia Central at Pindara Private Hospital

At Pindara Private Hospital, Sonia Central, developed by Planet Software, was piloted with nursing placements.

The pilot was conceived as a two phase process.

Phase 1: Simulated capacity planning using nursing placement data

As Pindara Private Hospital had already defined its placement capacity and placement allocations for nursing students for the period in which the pilot occurred. The Clinical Education Manager entered this data into Sonia Central to simulate the capacity planning process, which helped inform the number of Clinical Education Facilitators needed.

The sister application to Sonia Central, used by health services, is Sonia, which is used by education providers. Education providers have the option of opening up a window for health services onto relevant information held within Sonia. This window is called Sonia Online. Given the limited time available to negotiate and execute access to Sonia Online with relevant education providers, exposure to this functionality extended only to being able to view the functions of Sonia Online, rather being able to actively interact them.

Phase 2: Processing requests for future placements for enrolled nurses

To experience the process of receiving placement requests for the coming year (2015), from an education provider that does not use Sonia, an education provider provided details of their 2015 placement requests in a defined format in a CSV file. Pindara Private Hospital then carried out a bulk upload of these requests into Sonia Central, against the already planned placement capacity.

The reporting functions for placement capacity and allocation were also utilised. Functionality for monitoring attendance and documenting assessment and feedback for individual students were not used during the pilot.

Pindara Private Hospital and Planet Software remained in close contact during the pilot. Planet Software assisted with resolving help requests, configuration issues, developing new formats for views of specific information, and enhancing the CSV functionality of the system.

Log of issues and insights

Professionals at each site who had a substantial role in using the CPMS were provided with a template to log issues and insights arising during the pilot. Professionals were encouraged to capture:

- both positive and problematic issues and insights
- the implications of the issues and insights
- the time taken to achieve a resolution, the usefulness of support provided, and whether issues were satisfactorily resolved when assistance was required from the CPMS provider

The template for the Log of Issues and Insights is presented in Appendix G.

Post-pilot online surveys

The evaluation framework was used to inform the design of two questionnaires, one for students who used the CPMS while on placement and another for health service staff who used the CPMS.

Individuals who used the CPMS at each site were invited to complete the survey relevant to their role.

The online surveys are presented in Appendix H and Appendix I.

Post-pilot interviews and focus groups

On completion of the pilot at each site, key individuals involved in the pilot participated in a semi-structured focus group or interview.

The interview questions were informed by the evaluation framework and are presented in Appendix J.

Defining key features of the CPMSs

The providers of each of the three CPMSs were asked to complete a questionnaire to define the key features of the CPMS being used in the pilot. This questionnaire is presented in Appendix K.

The key features of each CPMS detailed in the questionnaire responses were summarised and documented in a consistent format.

The key features of InPlace Network, Sonia Central and SPOT are presented in Appendices D, E, and F respectively.

Collecting placement activity data

It was intended that placement activity data would be collected for the pilot period and compared to baseline data for an equivalent period. As each site had determined placement capacity and finalised student allocation to placements prior to the pilot, placement activity data for the pilot period offered no useful insights regarding the contribution of a CPMS to placement activity. As a result, conclusions regarding the possible contribution of a CPMS to placement activity cannot be reached through the findings of this pilot.

Analysis

For each CPMS, the findings from each of the data collection methods were analysed to identify key findings and triangulated to synthesise findings about each CPMS, as an individual system.

Findings across the three systems were synthesised to identify the themes pertinent to assessing the capacity of a CPMS to offer optimal value to placement management for a health service.

Limitations of the pilot

As with any pilot process, this project had a number of limitations that must be taken into account when considering the findings presented. These limitations include:

- The pilot was conducted in a short timeframe. This limited the pilot sites to assessing the contributions of a CPMS to the early implementation period during which the expected challenges of change management and 'teething' issues are still likely. This also limited the potential for negotiating processes for using certain features of the CPMSs between health services and education providers.
- By its nature, placement management involves negotiating relationships within and beyond the health service. In turn, effective use of a CPMS requires working with these relationships to establish optimal processes to make best use of the system's functions. It was not within the remit of this project to expect changes to formal placement management arrangements such as those defined in Clinical Placement Deeds.
- The varying nature of the roles and pre-existing demands on the professionals coordinating the pilot at each site meant that the resources each site could bring to the pilot differed significantly.
- A range of factors influenced the capacity of the different pilot sites to utilise the range of features each system has to offer.

CHAPTER 3 – PILOT FINDINGS

Introduction

The first section of this chapter explores the pilot findings relating to the impact of using a CPMS on the efficiency of placement management. Whilst recognising the limits of the pilot with respect to definitively determining the contribution of a CPMS to the overall efficiency of placement management, the findings:

- identify functions of a CPMS that play an important role in supporting placement management efficiency
- present details of two discrete functions of a CPMS that were clearly identified as contributing to placement management efficiency, namely:
    - reporting
    - delegation of rostering.

The second section of this chapter considers pilot findings that inform the issues a health service should consider when assessing the potential contribution of a CPMS, including:

- the fit between the CPMS and the health service characteristics
- the fit between the CPMS and the health service placement management processes
- the contribution of a CPMS to supporting relationships between stakeholders
- the contribution of a CPMS to supporting communication between stakeholders
- the capacity for a CPMS to accommodate diverse placement models
- the capacity of a CPMS to provide required and useful information to a health service
- how user friendly a CPMS is for diverse stakeholders
- considerations for optimising the value a CPMS contributes to a health service
- understanding the cost-effectiveness and cost-benefit of using a CPMS

The findings presented are informed by the outcomes of the pilot evaluation process. However, specific evidence regarding individual CPMSs used in the pilot and the outcomes from each pilot site are not presented. This approach has been taken to emphasise the *concepts* relevant to use of CPMSs rather providing a narrow focus on *specific CPMSs*. Through taking this approach it is anticipated the findings can be applied to any CPMS and will offer value over time as new systems are developed and approaches to placement management develop and change.

Throughout the findings, quotations from health services personnel and students are included, describing their experiences using a CPMS during the pilot.

The efficiency of placement management using a CPMS

The administrative demands of placement management are frequently cited as placing undue burdens on health services. In this context, the extent to which a CPMS influences the efficiency of placement management – either positively or negatively – is a factor of great significance.

The pilot sought to understand the contribution a CPMS makes to the efficiency of placement management through a range of variables, including:

- the features of a CPMS that contribute to its usability
- the impacts of using a CPMS on:
    - the range, accuracy and timelines of information available
    - the relative time taken to complete specific tasks
    - the distribution of placement management tasks across health services, education providers and students
    - the ease and effectiveness of identifying and allocating placement capacity
    - the efficiency of reporting
    - the relative value of a CPMS to different placement models

This pilot surfaced a number of important insights regarding the efficiency of *discrete functions* involved in placement management. However, the findings did not provide adequate evidence to reach firm conclusions regarding the *overall* impacts on efficiency arising from using a CPMS.

The specific functions of a CPMS that the pilot identified as playing an important role in supporting placement management efficiency include:

- the inclusion of all data in a single place that is accessible to all stakeholders who have appropriate permissions
- the availability of real time updates to information and actions where a common system is used between an education provider and health service
- the option for bulk data uploads using compatible files exchanged between education providers and health services when a common CPMS is not being used
- the capacity to carry out bulk actions against defined parameters, as well as individual actions
- the capacity for 'rule' based actions to occur automatically in defined circumstances
- the capacity to distribute placement management tasks across organisations and to specific roles and individuals, (including students)
- the means to report against diverse parameters

> *"Data collection is instantaneous once information is uploaded. Before we had to calculate this manually which was labour intensive."*

More detailed findings relating to these functions are presented in the second part of this chapter which discusses the factors a health service might consider when assessing the potential contribution of a CPMS to placement management.

Findings from this pilot clearly identified two discrete functions which contribute to improved efficiency:

- reporting
- rostering of placement shifts

Reporting

The most striking domain where a CPMS was identified as having the potential to offer efficiency was that of reporting. Pilot sites recognised this potential regardless of whether their local pilot process progressed to the stage of reporting or not. Most notably, a CPMS was recognised as offering the opportunity to report against combinations of variables that previously would not have been undertaken due to the complexity of integrating and collating data and the time involved in doing so. Clinical Education Coordinators recognised the significant value efficient reporting functions contribute to carrying out day-to-day operational functions, fulfilling routine reporting requirements, and providing quality information and advice to senior management within a health service.

Depending on the features of a CPMS being used, examples of valuable reporting options identified by pilot participants included:

- being able to identify at any moment on any day exactly where individual students were and who was supervising them
- a clear picture of placement allocation against placement capacity
- various combinations of student numbers, placement numbers, placement days and placement hours, within specific clinical areas
- completion rates for student and supervisor feedback forms

An important observation from the pilot was the surfacing of new understandings regarding clinical education practices and activity, made possible by having the means to consider information in new and diverse combinations.

Factors identified during the pilot as influencing the efficiency of reporting included:

- the range and relevance of standard reports offered by the CPMS
- the extent to which the system enables the user to customise existing reports

- the means for users to design their own reports to respond to specific needs and requests
- the responsiveness of the system provider to design custom reports on request

Delegation of rostering

Specific issues of efficiency exist in relation to a CPMS's capacity to accommodate the different roster arrangements for different disciplines and placement types.

Maximising the efficiency of this process calls upon different CPMS functions for different placement types. For example, efficient rostering for placements with little to no roster variability from day to day or week to week requires a CPMS to be able to apply a rule based roster pattern for the duration of the placement without a need for item by item data entry.

In contrast, placements with significant roster variability place significant administrative demands on a health service. The pilot demonstrated that a CPMS can significantly reduce this demand on the health service if students are delegated the task of scheduling their own shifts, within pre-programmed parameters, and when guided by specified organisational standards and requirements.

> *"Because students manage their own rosters we no longer have to oversee student schedules as closely."*

Considering the potential contribution of a CPMS to placement management by a health service

Providing a good fit for the characteristics of a health service

During the pilot it became evident that when exploring the use of a CPMS, a health service needs to consider the characteristics of the health service as a whole and the characteristics of the component disciplines and teams in which the CPMS might be used.

Characteristics of relevance reported in the findings included the size of the health service; the size of individual disciplines providing clinical education; and whether the health service operates as a discrete entity or is one of a number of service sites with a degree of integration.

The size of a health service influences many factors relating to placement management. Examples include the amount of clinical education provided; the range of disciplines clinical education is provided to; the types of placement models offered; how placement management responsibilities are distributed; the complexity of clinical education management processes; and the approach to managing relationships between the health service and education providers. In turn, each of these variables influence the use of a CPMS.

In particular, the pilot findings suggested that significant value arises from a CPMS when placement activity reaches a particular threshold. Beyond this threshold, a CPMS contributes to greater efficiency and increased accuracy through aggregating planning, monitoring, feedback and reporting processes. Below a certain level of placement activity, maintaining clear sight of placement management processes may be just as efficient, or more efficient, *without* a CPMS.

Specific needs are likely to arise when implementing a CPMS in a single organisation across multiple disciplines, and in a single organisation across multiple services sites and jurisdictions. The pilot did not present the opportunity to explore these issues directly. However, of relevance to these circumstances, is the finding that there is a need to be able to configure a CPMS to operate with a minimum level of functionality across all disciplines/locations. For specific disciplines/locations where more sophisticated CPMS functionality offers value, the minimum standard can be supplemented (e.g. for disciplines with high levels of placement activity or complex placement management needs). Where such an approach is possible, a CPMS can be customised to be most useful to individual disciplines/locations, while providing a common placement management process and minimum data set.

> *"A CPMS may be of benefit to planning placement capacity where there are large numbers of potential supervisors who work varying hours/shifts and this information could be entered to determine capacity (offers)."*

Providing a good fit for the placement management processes of a health service

Each health service, and its component disciplines that provide placements, will have preferred and established arrangements for planning and managing placements with education providers. The pilot findings reinforced the importance of:

- developing an explicit understanding of these preferred arrangements and how they might influence and be influenced by the use of a CPMS
- identifying the extent to which a CPMS can be configured to best match this local context

Alignment between preferred processes and CPMS processes

The pilot findings revealed the need to consider the potential alignment between the preferred placement management arrangements and a CPMS, from the following perspectives:

- the data and functionality that do align

- the data and functionality that may be missing from the CPMS, the consequences that may arise from their absence, approaches to addressing these gaps and how efficient and effective these approaches are likely to be
- the additional data and functionality the CPMS may bring, including:
    - the value the additions bring, and/or
    - the extent to which the additions provide redundant information and result in inefficiencies

These considerations will assist in revealing which existing processes and systems may need to be maintained in addition to a CPMS and the impacts this might have on the efficiency and accuracy of placement management. It will also assist in identifying previously unrecognised opportunities that a CPMS might contribute to a health service.

During the pilot three noteworthy issues relating to the alignment between preferred placement arrangements and use of a CPMS were identified. These included whether the CPMS can accommodate:

- differences in who initiates placement planning (i.e. the health service or the education provider)
- situations where aspects of placement management are centralised (e.g. within a discipline or service system across organisational boundaries for the state)
- distribution of responsibilities to specific roles within the health service or the education provider

Placement initiation

The pilot findings suggest that a common assumption in CPMS design is that placement planning will be initiated by an education provider making a placement request to the health service. However, the health services within the pilot reported that this is not how their current placement management works. Each of the three health services reported being clear on their placement capacity, and that they make placement offers to the full extent of this capacity. For these three health services, the placement request process is built upon existing relationships with education providers, and there is no need for the health service to receive defined placement requests as the first step in the placement management process. From the perspective of the health services involved in the pilot, it would be more efficient if the CPMS was configured so the process began with the health service simply offering available placements to education providers.

> *"The placement request and allocation process is a major issue for us. We offer placements to the education provider who then allocate according to student request. So fundamentally the system works the wrong way around for our purposes."*

Centralised and distributed placement management

In some instances placement management occurs in an entirely distributed way. Each education provider, for each discipline, negotiates and manages placements with a specific local health service. In other circumstances, some aspects of placement management are centralised. Centralised processes may occur for a whole discipline across multiple education providers within the state, or for a single health service across multiple service locations, such as a private hospital group.

Where aspects of placement management are centralised, there are processes and tools in place that cross service system boundaries for these elements of the management process. During the pilot evaluation, questions were raised regarding how well the functions of a local CPMS could be integrated with the systems of centralised processes that cross service boundaries. Ideally, to avoid the data errors that can arise when parallel processes are used, there would be minimal duplication of systems and effort. This question requires more detailed exploration as the pilot did not provide adequate information to establish a good understanding of this issue.

> *"For a profession with good statewide processes, many things would take longer. Because not all health services and education providers are using the same system, this would also complicate factors for a pre-existing process that's coordinated across the state."*

Distribution of responsibilities for placement management

The pilot demonstrated the importance of a CPMS's ability to distribute specific placement management responsibilities to defined organisations, roles and individuals. This capacity is essential to enabling the implementation of preferred placement management processes as negotiated by a health service and its stakeholders.

In some instances this will simply mean configuring the CPMS to allocate responsibilities to match existing arrangements. In other circumstances, specific CPMS functions and the visibility of data across stakeholders (with defined permissions) can present new opportunities for greater distribution of the placement management workload. For example, the opportunity for students or education providers to roster students to shifts (either as individual shifts or block placements) can bring significant time saving to the health service.

> *"It can be accessed at any time, from any device that has internet, from anywhere. So it's very useful for when emergencies happen and shifts need to be changed or altered."* – Student

Configuring a CPMS to align with preferred processes

The pilot findings demonstrated that the extent to which a CPMS can be configured to the needs of a health service is key to achieving a good fit between the system and preferred local processes. The findings reinforced the importance of:

- investment by the CPMS provider in understanding existing processes to inform configuration of the system in order to best match local needs and preferred processes
- the capacity of the CPMS to be customised at both a macro level (e.g. the sequence of steps in placement management processes, the ability to turn functions on and off, or condense processes requiring less detail) and a micro level (e.g. terminology; addition of new fields to existing data element; addition of new data elements; permissions for viewing, contributing to and editing data; allocation of students to clinical domains rather than locations)
- careful consideration of the unintended consequences that may arise from configuring a CPMS in a particular way
- the extent to which configuration changes can be managed by the health service, rather than relying upon the system provider
- the capacity to reconfigure the CPMS as the context and needs change over time, without compromising historical data sets

Supporting relationships between stakeholders

As with any endeavour involving engagement across multiple stakeholders, the pilot findings reinforce the well-recognised fact that information technology cannot replace the critical contribution strong relationships make to effective outcomes. The pilot confirmed the importance of such relationships being established around a shared purpose; reaching agreement on organisational roles and responsibilities in working towards this purpose; and developing mutual understanding of organisational context, capability, needs and limitations.

> *"The system needs to take into consideration the different relationships between health services and education providers."*

When considering the interplay between stakeholder relationships and use of a CPMS, the findings of this evaluation reflect the need to examine a number of key questions within the context of a specific health service, including:

- To what extent is a strong relational foundation between stakeholders a necessary *prerequisite* to the successful implementation of the CPMS?

- To what extent might the CPMS serve as a valuable catalyst and support to the *development* of stakeholder relationships?
- In what ways might the features of the CPMS support or compromise the development and maintenance of stakeholder relationships, including:
    - the aspects of placement management that present challenges to developing and maintaining relationships between key stakeholders, and the features of the CPMS that might contribute positively to relieving these challenges
    - the aspects of placement management that are dependent on direct and personal stakeholder engagement and run the risk of being compromised if left to the indirect information exchange processes provided by an information technology system

Responses to each of these questions will be unique to the specific health service, local context and the CPMS being considered and need to be responded to within the particular context.

> *"There needs to be a balance of responsibility across the players for the system to work well."*

Supporting effective communication between stakeholders

The process of placement management requires considerable communication between stakeholders across multiple stages in the process. Some examples of these include health services informing education providers of placement availability, education providers communicating details of placements they would like to accept and the details of the students to be allocated to the placements, students receiving information about a placement, changes in placement arrangements from either party, and monitoring of placement progress.

Information exchange between the health service and education providers

The pilot findings demonstrated that the communication processes noted above can be more readily supported if the same CPMS is used by a health service and an education provider and individuals have appropriate permissions to view and contribute to placement management functions. Where these arrangements are in place, information is communicated automatically through real-time updates as different stakeholders use the system.

Frequently, however, a direct interface between the placement management system of a health service and that of an education provider may not exist. This can be because two different CPMSs are being used or because of the education provider's preferred approach to placement management. In this instance, information exchange may be possible through defined file formats that can be downloaded from one system and uploaded into another, either by the education provider or the health service.

"One advantage of an effective placement management system is having all of the information in one spot and accessible by all stakeholders in real time. This was not fully tested in our pilot, but could potentially be one of the significant advantages."

Internal communication and communication across stakeholders

Different CPMSs offer a range of more specific communication mechanisms to support internal health service communication and interactions across stakeholders. The pilot demonstrated that matching the available functions to the context of the health service and its stakeholders can significantly streamline and improve the consistency of communication processes. Examples of CPMS communication functions provided by one or more of the CPMSs in the pilot that may offer value to placement management include:

- system alerts within the CPMS or by email that inform stakeholders of outstanding actions,
- the means to establish business rules that utilise email templates (including mail merge placeholders) and automatically communicate outcomes of actions such as acceptance of allocated students,
- the means for bulk communication actions either automatically or as required for groups with common information needs and interests,
- the capacity to build forms, surveys and questionnaires, distribute them to targeted groups, and report on collated and analysed results,
- scheduling of interactions and interviews between stakeholders,
- uploading and sharing of specific documents based on specified permissions, and
- the direct use of social media from the CPMS to send alerts and notifications.

"It's useful having the information on a system so managers of each area can identify which student they are getting on a shift and when."

Confidentiality

Maintaining confidentiality standards is an important consideration in relation to information exchange. CPMS functions controlling who has permission to view, contribute, and edit data assist in fulfilling these standards. Similarly, the means to control visibility of individual notes, feedback, and other content for individual students, provides more fine-grained capacity to manage privacy and confidentiality. Beyond these permission functions, the pilot demonstrated the importance of using practices that protect confidentiality in day-

to-day use of a CPMS. For example, where computers are shared in open work areas it is important that users exit from specific CPMS pages when they are not being used.

Accommodating diverse placement models

As demand for clinical education increases, a wide variety of clinical placement models are being used. The pilot identified a number of issues pertinent to the contribution of a CPMS to the management of different placement and supervisory models.

Standard versus variable rosters

For 'block' placements, where a recurring pattern of hours and days is used for the duration of the placement, setting these placements is most efficient if a single process can be used to roster the entire placement. The capacity to apply a similar process in 'bulk' to a group of students with the same requirements offers further efficiency to the process.

Where a CPMS allows rostering of shifts to be delegated to students (with pre-programmed rules and requirements), placement models that involve variable schedules are made more viable for the health service by reducing the administrative demand placed on clinical placement coordinators.

> *"The system was particularly valuable for placements with variable shifts – i.e. managing a mixed shift roster."*

Diverse supervisory arrangements

The pilot evaluation revealed the importance of a CPMS accommodating contributions from diverse supervisory arrangements, including:

- a number of different supervisors, with a primary supervisor nominated in some contexts but not always
- internal supervisors (i.e. health service employees) as well as external supervisors (e.g. education provider staff)
- formal peer supervision arrangements
- transdisciplinary supervision arrangements

Although not answered through the evaluation, the pilot surfaced the question of how to most effectively use a CPMS when a student participates in an integrated placement across two organisations that do not have an integrated CPMS. In this circumstance, consideration needs to be given to management of details such as attendance records, placement assessment and feedback across the two locations.

Providing required and useful information to your health service

This pilot has clearly demonstrated that the scope, quality and format of information a CPMS can provide is central to the value such a system offers a health service.

The range of information a CPMS might include is very wide, including, but not limited to:

- administrative arrangements and agreements between education providers and health services
- student biographical details and past placement history
- current placement details including rosters, internal and external supervisors, learning agreements, feedback forms, and assessments
- attendance records
- historical placement records

Alignment between information needs and CPMS information collection capacity

The pilot has shown that key to maximising the value a CPMS can bring to a health service is achieving strong alignment between the health service's information needs and the CPMS's information collection capacity. This requires the health service has a clear view of the information needed to fulfil its administrative, operational, educational and reporting functions. This includes defining the specific information parameters needed in each of these categories. Further, a health service must identify the degree of importance and immediacy of value of each parameter, which means recognising:

- the information it is essential to collect
- the information it would be immediately valuable to collect
- the information that holds potential value in the medium to long term future

Implications of gaps in required and useful information

Expecting that there will be a perfect match between the information needs of a specific health service and the standard information a particular CPMS is designed to collect is unrealistic. More important is the extent of alignment that does exist and options to resolve identified gaps through modifying the CPMS's existing fields, adding new fields to existing data items, and expanding the set of data items being collected in such a way that the new information can be effectively interfaced and integrated with associated data elements. Where it is not possible to achieve inclusion of all key data elements within a single integrated system the complexity and cost of bringing together two different information sources to fulfil related tasks needs to be carefully evaluated.

Avoiding collecting unnecessary data

Equally important is that a CPMS does not demand collection of information that is redundant to the health service, or to a particular subgroup within the health service. The pilot revealed the importance of being able to turn off such data collection without compromising the functionality of other elements of the CPMS.

Efficient data collection

There will always be a balance that needs to be struck between the data that is recognised as useful to have access to and the burden of collecting the data. Having determined the data set required and desired by a health service, it is important to attend to how efficiently this information can be gathered and entered into the CPMS:

- Can data entry be distributed across roles and individuals to share responsibility and minimise the load on the health service generally and any one individual specifically?
- To what extent can the information be automatically imported from other systems in a compatible form (e.g. existing health service systems for supervisor details, education provider systems for student details)?
- Does the system facilitate bulk data upload and actions?

Each of these questions must be considered to contribute to well-informed decisions regarding the boundaries of the information set being sought and the efforts that will be made to achieve this outcome.

Changing information needs over time

Considerations during the pilot reflected the reality that changes occur over time regarding the information that needs to be collected and the information it is useful to collect. Specific data needed today may not be needed tomorrow, and vice versa. Drivers of these changes may include accountability requirements; the systems and processes of health services and education providers; and the mix, needs and contexts of students. The capacity for a CPMS to readily respond to and reflect these changes through the capacity to scale up and scale down the data collected, whilst maintaining data integrity across time, is an important function.

Information views and reporting

Beyond simply collecting required and useful information the pilot reinforced the importance of how the data is presented. A CPMS must present data to users who have different roles and information needs in ways that are best suited to their overall roles and to specific tasks within their roles. Participants in the pilot emphasised that this is dependent on two things: the core page layout must be well designed; and it should be possible to customise views to suit the needs of specific roles and individual preferences. It should be possible to display

information in both individual and aggregated views, defined by different variables (e.g. date ranges, discipline, level, supervisor, and ward or team allocation).

> *"I can appreciate how the system is beneficial to my role in that it is a central place for student information and rosters that managers from multiple different clinical areas can access."*

As noted previously, this pilot demonstrated that the reporting functions of a CPMS are an important and potentially powerful tool that significantly exceeds the reporting capacity of most in-house systems. The pilot surfaced a range of important factors in relation to the reporting functions of a CPMS. These included:

- the comprehensiveness of the standard reporting functions of the CPMS
- the match between these reporting functions and both the required reporting needs of the health service and the reporting needs that are useful
- the capacity to independently modify the standard report functions through including and excluding the data elements included within the report, filtering the specific data fields included (e.g. date, supervisor, education provider, student level, etc.)
- the support available from the system provider to generate additional reports in a timely way
- the need for the health organisation to develop new reports independently of the system provider and whether the CPMS offers this capacity in a user friendly way, and
- the capacity to customise the format of the report output

> *"All our reporting had to be done manually or with the use of a spreadsheet. Nothing was integrated. So this system is far superior."*

Being user friendly for all stakeholders

There are many issues that contribute to how user friendly a CPMS is. Although many are directly related to the system itself, the user friendliness of a system is in reality a complex interplay between the system itself, the context in which it is being used, and the skills and motivators of the system's users.

This project explored a range of factors relevant to how user friendly the three CPMSs were, including whether the systems were *intuitive*, *forgiving*, *navigable*, readily *understood*, *efficient*, *fast*, *informative*, and *reliable*. The findings confirmed the importance of each of these parameters and the range of variables contributing to each.

Importantly, the pilot findings also demonstrated that the user friendliness of a CPMS will shape:

- the extent and nature of training and ongoing support needed for successful implementation
- the persistence users are likely to bring to using a CPMS
- the likelihood that the full functionality of a CPMS will be used
- the likely contribution of the CPMS to the efficiency and effectiveness of placement management

> *"The impact is directly related to usability of the system. If the system is cumbersome and difficult to understand, it will not have a beneficial impact on meeting information needs. The system may be capable of providing timely, accurate information, but the user must be able to figure out how to get that information."*

More specifically, the pilot findings confirmed the importance of the following factors:

- How ***intuitive*** the CPMS is, which will influence:
  - how easy the system is to use independently
  - the base level of computer proficiency needed to quickly develop competence and confidence in using the CPMS
  - the extent of formal training needed versus the ease of learning to use the CPMS through day-to-day operational use
  - the frequency that a CPMS needs to be used in order to maintain skill proficiency

> *"For some staff who aren't good with computers, and are very slow at typing, it is slow going. Paper would be more efficient in those situations."*

- How ***forgiving*** the system is, such that the CPMS:
  - makes it difficult to make a mistake or 'break' the system
  - not only lets you know if you have made a mistake but what the mistake is and provides guidance to rectify the mistake
  - lets you undo prior actions in order to rectify errors
- How ***navigable*** the CPMS is, including variables such as:
  - the clarity of the layout of the CPMS
  - the logic of the layout of the CPMS relative to the sequence and links between required steps and processes

- the consistency of the system's formatting and ways of performing actions from one section and process to another
- the extent to which the system guides you to efficiently and accurately complete each required step of all required processes
- the ease with which individual and aggregated information and reports can be understood and interpreted

> *"If a system isn't intuitive to the user and doesn't prompt for the next step, the user then has to use the instruction manual to follow the necessary sequence of steps to complete a task. This then means that significant training and consistent use is needed for a user to feel competent using the system."*

- How readily ***understood*** the CPMS is, including:
  - how easily each of the CPMS functions are understood (e.g. scheduling shifts, completing feedback, planning capacity, allocating placements)
  - the familiarity of the terminology used, and/or the extent to which it can be customised to align with local terms
- How ***efficient*** the CPMS is, including:
  - the capacity for the CPMS's functions to be performed in the minimum number of steps
  - the extent to which the CPMS fulfils all placement management requirements, rather than needing additional systems to fulfil unmet needs
  - whether additional processes and/or systems can be directly or indirectly interfaced with the CPMS, or can only be operated completely independent of the CPMS
  - the extent to which duplication of effort occurs if additional processes and/or systems are required
  - the use of bulk processes and rules that can be configured to guide the CPMS to perform automatic actions in response to defined circumstances, and
  - the ease and effectiveness of uploading and downloading from the CPMS to other related systems

> *"It is easy to allocate students to certain shifts in my clinical area. It clearly has the 5 different clinical areas and what shifts are available in each. And it also doesn't let you book more than one shift in each area, which is helpful."*

- How ***fast*** the CPMS is, demonstrated by rapid system response to actions and processing of information (recognising system speech is likely to be influenced by a combination of the capacity of the CPMS itself and the information technology infrastructure of the health service).
- How ***informative*** the CPMS is, including provision of immediate information regarding:
    - what is happening when waiting for actions to be processed
    - the details of errors made
    - the breaching of established rules designed to guide intended arrangements, e.g. planned capacity, allocation of supervisors, availability of specific shifts, patterns of shifts across a placement etc

> *"Initially I had a problem with uploading and found out there were filters on. I needed the system to tell me that the filter was on so we could fix the problem."*

- How ***reliable*** the CPMS is, including the extent to which:
    - the extent to which system 'bugs' and errors occur
    - unplanned downtime occurs and causes disruption to the needs of users of the CPMS in real time and for the overall integrity of data
    - alternative processes are available to meet information needs during unplanned downtime
- How well ***supported*** the CPMS is, including:
    - access to online and/or documented 'help' information that is readily navigated and effectively supports individuals in different roles to resolve routine questions independently
    - access to online or telephone 'help' that provides timely and successful resolution of questions/issues
    - the timely provision of information about planned downtime
    - the timely resolution of unplanned downtime

Optimising the value a CPMS contributes to your health service

Whilst recognising that the design of a CPMS must include many of the features identified to this point, this pilot has emphasised that achieving optimal value from a CPMS depends on attending to many variables that sit *beyond* the design of the system, including:

- attending to the general and specific opportunities and challenges of using a CPMS for the health service as a whole and for individual disciplines or practice areas (e.g.

considering the needs of disciplines of different sizes and with different placement models, the context of placement management across services and jurisdictions)

- reaching agreement within the health service and with each relevant education provider, on the scope of the functions of the CPMS to be used, the processes to be followed and the responsibilities to be delegated to relevant contexts and roles (e.g. rostering by students, the health service or the education provider; initiation of the process by the health service or the education provider)
- determining the necessary governance and communication arrangements based either on existing arrangements or new arrangements that need to be established to ensure effective oversight of placement management processes between the health service and education providers
- defining the minimum data set to be collected by each discipline and/or practice area within the health service
- reaching mutual resolution on changes required to agreements and Clinical Placement Deeds between education providers and health services that arise out of using a CPMS (e.g. sharing student information, third party information storage etc.)
- considering all the systems and processes the CPMS needs to or would benefit from interfacing with, internally (e.g. staff roster systems) and externally (alternate CPMSs, student enrolment systems etc.)
- negotiating with education providers to discontinue use of historical processes that can be accommodated by the CPMS (e.g. paper forms, excel spreadsheets etc.) to reduce duplication and minimise the risk of error
- considering the training and development requirements for use of a CPMS at set up and over time
- ensuring adequate information technology infrastructure is available within appropriate locations within the health service proportionate to the range of roles and number of individuals contributing to the CPMS (e.g. on wards and within departments if
- working with relevant education providers and the CPMS system provider to ensure consistency of the CPMS version being used

Based on the pilot findings, before implementing a CPMS it is important to establish the status of these issues, the resources required to respond to them, and the commitment of key stakeholders to achieving these outcomes. Equally important is understanding what might preclude achievements against these variables and the consequences to placement management and the functionality of the CPMS if this occurs. For example:

- where an education provider is not willing/able to provide data through a direct CPMS interface or in a compatible file format, the functionality and efficiency of many aspects of the CPMS may be significantly compromised

- where the functions of using a CPMS are distributed across the health service workforce and students, inadequate access to information technology may affect how comprehensive and timely the data entry is
- where a health service CPMS is designed such that the full functionality of the system requires interfacing with a partner CPMS used by an education provider, if adequate permissions are not granted by the education provider the functionality of the system will be significantly reduced

The pilot findings demonstrated that responding to the issues identified above will take time, commitment and resources.

> *"While the system might demonstrate that there is capacity to take more students, we can't ignore the human factor."*

It can be inferred from the pilot findings that the arrangement through which it will be simplest to manage and respond to these issues, and that offers the greatest functionality, is where a health service and an education provider *both* fully utilise the *same* CPMS. However, there are a number of CPMSs on the market and currently each Queensland education provider and health service determines their own tools and approaches to placement management. With this as the context, a health service is unlikely to have the luxury of using a CPMS that is also used by each of the education providers to which they contribute clinical placements. As a result, health services need to assess how successfully a specific CPMS will interface with the range of different placement management systems and processes they might encounter across education providers (both commercial products and locally designed tools). The more similar the processes are for interfacing the health service CPMS with each of the education provider systems, the easier it will be to establish optimal use of a CPMS within a health service.

> *"All stakeholders would need to take it on as a system for it to work best. Otherwise I'm still doing the old process plus the new one."*

Understanding the cost-effectiveness and cost-benefit

Formally evaluating the cost-benefit[2] and/or cost-effectiveness[3] of using a CPMS was out of scope for this pilot. None the less, close attention to both these concepts is important for an organisation exploring any information technology infrastructure investment.

Cost-effectiveness and cost-benefit will almost certainly vary across health contexts depending on the specific CPMS being considered, the characteristics of the health service and the nature of the contribution the health service makes to clinical education.

Summary and conclusions

This chapter presented findings from the pilot that explore the questions of the efficiencies arising from using a CPMS and the factors that warrant consideration by a health service when exploring the potential contribution a CPMS has to make to placement management.

The pilot identified a range of CPMS features that play an important role in supporting the efficiency of placement management, but the relative contributions of these features varies depending on the scale of clinical education provided by a health service/discipline and the preferred approaches to placement management. The duration of the pilot and scale of pilot findings did not enable a definitive answer to be reached regarding the *overall* efficiency of placement management using a CPMS in contrast to not using a CPMS.

Findings from the pilot revealed a number of important factors for a health service to consider when exploring the possible value of a CPMS to local placement management. These factors focussed on the capacity for alignment between the CPMS and local needs, the contribution of the CPMS to communication and relationships between stakeholders, the information and reporting functionality of the system, the system's usability, and factors needing consideration to ensure optimal functioning of a CPMS within the local context.

> *"Using a placement system has a lot of potential, however the system would need to accurately reflect the process of placement allocation, use our terminology, be intuitive, and prompt the user through the necessary steps of each task, be flexible and allow for 'turning off' unnecessary features."*

[2] A comparison of monetary costs and monetary benefits.
[3] A comparison of monetary costs and non-monetary outputs.

CHAPTER 4 – SUMMARY AND CONCLUSIONS

This pilot has provided the opportunity to explore many factors relating to the use of three CPMSs across different disciplines and health services. This has included the chance to experience not just the features and functionality of the CPMSs but also the real world significance of implementing clinical placement information technology into the complex system of clinical education within the health sector.

Contributions of a CPMS to efficiency

The findings have demonstrated that a CPMS includes many features with the potential to contribute to the efficiency of clinical placement management. Noteworthy examples include reporting functions that allow easy integration of data for diverse purposes and from diverse perspectives and the capacity to distribute placement management tasks to education providers and students. The value of a range of other time saving functions was also evident, including bulk actions, the use of rules, communication through immediate data updates across stakeholders using the same CPMS, and automatic generation of emails to confirm specific decisions and actions.

Determining the *overall* contribution a CPMS can make to the efficiency of placement management was not possible due to the limitations of time and scope. A definitive conclusion on this question would require complex analysis of a multitude of variables specific to the CPMS itself and the broader placement management process and context. Additionally, reliable conclusions on this question could only be reached once a CPMS has been fully implemented for significantly longer than this pilot allowed.

Variables for health services to consider regarding the potential role of a CPMS

The pilot findings demonstrate the importance of considering numerous factors when exploring the use of a CPMS in a health service. While the findings demonstrated that many of these factors relate to the features and functions of a CPMS, just as important is the interaction between these features and the context the CPMS is used in.

The pilot reinforced that a CPMS must bring the right mix of features and flexibility to provide the best fit with the characteristics of a health service, the placement models it offers, and its preferred processes for placement management.

Recognising the diverse ways a CPMS can contribute timely, consistent and reliable communication processes between stakeholders was an important pilot finding. Not surprisingly, what was also evident is the critical importance of strong relationships and agreements between internal and external stakeholders. Although not clearly answered by

the pilot, it is quite possible that the communication tools of a CPMS have the potential to support stakeholder relationships. Even so, a CPMS itself will not replace the need to invest directly in building and maintaining relationships.

The pilot also demonstrated the role a CPMS can play as a powerful information tool. Once set up and being used operationally, a CPMS can provide real time information to diverse stakeholders in formats that contribute to day-to-day operational processes. Additionally, the findings revealed the efficient and effective reporting value of a CPMS to contribute to planning, monitoring and accountability requirements.

Finally, the pilot findings identified many factors as being critical to the effective implementation and use of a CPMS. Some of these factors were specific to the CPMS such as intuitiveness, speed, and reliability which contribute to system usability. Other factors related to issues beyond the CPMS, such as the effectiveness of agreements between the health service and education providers to contribute to the CPMS; the range of systems used by different education providers the health service works with; and the required and available information technology infrastructure within the health service.

Integrating the findings from the pilot, a *Checklist for Health Services Considering a CPMS* is provided at Appendix A.

Further questions and future considerations

The pilot findings contributed valuable insights into a significant mix of factors pertinent to use of a CPMS and the potential contributions such a system can make to effective and efficient clinical placement management for a health service.

One of the key findings of the pilot is that the greatest functionality from a CPMS is achieved when health services and education providers use the same, interfacing system. Queensland health services and education providers all independently determine and implement their own approach to placement management, therefore diverse arrangements and systems are in place across the State. In this context, the potential that a single CPMS may at some point be adopted by all stakeholders is unlikely.

Minimising the issues that arise from this situation is therefore important if optimal benefits are to be realised from implementing a CPMS. There are a number of potential approaches that could be applied to addressing this issue:

- using the same CPMS across health services either at a statewide level or within particular networks of services or geographic areas, and encouraging education providers to either adopt the same CPMS or develop mechanisms through which their CPMSs can communicate with the CPMS being used by health services;
- developing information technology solutions that provide effective bridging interfaces between different CPMSs; and/or

- establishing a framework to enhance consistency of processes for statewide management of clinical placement.

Exploration of the relative of merits of these approaches, individually or in combination, warrants comprehensive consideration.

Beyond this consideration, as each health service considers the potential role, value and functionality of a CPMS within their own context, there are a number of questions that warrant further investigation. These questions include:

- What is the overall efficiency of using a CPMS, including the relative impact of different variables on the assessed efficiency (e.g. student numbers; placement hours; number of service sites, professions, and universities; and workforce size)?
- What is the cost-benefit and cost-effectiveness of using a CPMS?
- What are the optimal solutions to scenarios where available CPMSs would require duplication of placement management processes and information (e.g. for disciplines where elements of placement management occur at a state level)?

Importantly, incorporating understanding of the local context of each health service is a key variable in reaching reliable conclusions on these factors.

APPENDIX A – Checklist for health services considering a CPMS

This checklist of questions is designed guide the considerations of health services exploring the potential value of a clinical placement management system for supporting placement management within their service.

1. **What characteristics of your health service need to be accounted for when using a CPMS?**

   a. How many service sites does your health service include? Will they all use the CPMS? Do staff move between these sites? Do students move between these sites when on placement?

   b. How many disciplines does your health service include? Will they all use the CPMS?

   c. How much clinical placement activity do each of these disciplines provide?

2. **How well can the preferred approaches to placement management that your health service uses be accommodated by the CPMS?**

   a. What data requirements and functionality between your health service and CPMS are aligned – for example –

      i. Does the CPMS allow initiation of a placement offer by the health service?

      ii. Does the CPMS efficiently accommodate processes for disciplines that use statewide placement allocation processes?

      iii. Does the CPMS allow distribution of placement management responsibilities across multiple stakeholders, (e.g. student and education provider scheduling of rosters and allocation of students to clinical areas)?

   b. What data requirements and functionality do not align between your health service and the CPMS and how can this be accommodated –

      i. through configuration of the CPMS at a macro level and a micro level, including 'turning off' specific functions, and

      ii. through interfacing or parallel systems

   c. What new data and functionality options are available through the CPMS? What value, if any, do these options provide?

3. How well does the CPMS support the building and maintenance of relationships between your health service, education providers and students to support the placement management process?

a. To what extent is a strong relationship between stakeholders needed before embarking on use of the CPMS?

b. To what extent might the CPMS support the development of the relationship between stakeholders?

c. What aspects of the relationship between stakeholders should not be left to the indirect information exchange processes provided by a CPMS?

4. How well does the CPMS support communication between stakeholders?

a. Do the education providers you provide placements to use the same CPMS and are they willing to work with your health service through a direct interface between the two systems?

b. Where a direct data interface with education provider/s is not available is there an option for direct upload/download of bulk information between the systems used?

c. What communication tools are available through the CPMS (e.g. SMS, automatic email via templates and rules, social media, survey and questionnaire tools, uploading and sharing of documents with appropriate permissions to view, etc.)?

d. How effectively can confidentiality be maintained through CPMS features and operational processes?

5. Does the CPMS accommodate diverse models of placement supervision and roster arrangements?

a. Can placements with standard hours be rostered using rules to apply a roster pattern across the placement?

b. Can the administrative demands of placements with variable hours be reduced by delegation of roster responsibilities to students?

c. Can the CPMS accommodate a range of supervision arrangements (e.g. shared supervision across organisations, formal peer supervision, external supervisors within the health service etc.)?

6. Does the CPMS provide information that is required and information that is useful?

a. What information can the CPMS collect?

b. What are the implications of any gaps in the information the CPMS can collect?

c. Is it possible to avoid collection of unnecessary data?

d. What tools does the CPMS have to support the most efficient collection of data (e.g. distribution of data entry across roles and individuals, automatic import between interfacing systems, bulk data upload and download etc.)

e. How well do the options for information views and reports meet the needs of the health service?

i. Can views be customised to meet the content and layout needs and preferences of specific roles and individuals?

ii. What is the match between the standard reporting functions and the required reporting functions?

iii. How independently can the health service modify standard report content and format?

iv. What level of support is needed and available from the system provider to generate additional reports in a timely way?

7. How user friendly is the system for all stakeholders?

a. How **intuitive** is the CPMS?

Can it readily be used independently, without extensive training, high levels of computer proficiency, and the need for constant use to maintain skills?

b. How **forgiving** is the CPMS?

When an error is made does the CPMS provide clear information and the option to undo the previous actions? Is the system robust and difficult to break?

c. How **navigable** is the CPMS?

Is the layout clear, logical and consistent across sections? Does the system guide you through the required steps in a task?

d. How **readily** understood is the CPMS?

Are the functions of the system easily understood? Is the terminology familiar, or able to be customised to local terms?

e. How **efficient** is the CPMS?

To what extent does the CPMS fulfil all the needs of the health service? Can it interface effectively with education provider systems and support real-time or bulk download/upload of information and performance of actions? Does the CPMS allow distributed contributions to the system?

f. How **fast** is the CPMS?

Does the CPMS process information quickly?

g. How **informative** is the CPMS?

Does the system provide details of errors made and inform users when rules are breached regarding planned capacity, allocation of supervisors, availability of shifts etc.

h. How **reliable** is the CPMS?

To what extent are 'bugs' and errors experienced in the system? Does unplanned downtime cause minimal disruptions?

i. How well **supported** is the CPMS?

Is online and documented 'help' information available for routine needs? Is online or telephone 'help' available that successfully resolves issues in a timely way? Are users informed of planned downtime and is unplanned downtime resolved quickly?

8. What needs to be considered and acted upon to optimise the value a CPMS can contribute to a health service?

a. What placement management systems are used by associated education providers? How does the possible and actual interface enable or diminish the full potential of the CPMS used by the health service?

b. What details need to be changed in relation to current internal and external operational processes, communication, agreements and Clinical Placement Deeds, to establish and maintain the full potential of using a CPMS?

c. What historical processes need to be discontinued if a CPMS is used, in order to reduce duplication and minimise the risk of error?

d. What infrastructure needs must be addressed?

e. What are the consequences for effective placement management and use of a CPMS if these issues are not able to be successfully responded to?

APPENDIX B – Evaluation framework

Clinical Placement Management System Pilot

Evaluation Framework

The evaluation of the Clinical Placement Management System Pilot will address each of the following four themes:

1. Key ***features*** of the clinical placement management systems
2. ***User experience*** using a clinical placement management system
3. ***Impacts*** arising from managing clinical placements using a clinical placement management system (within the life of the pilot)
4. ***Outcomes*** for clinical placement capacity using a clinical placement management system (perceptions of potential longer term impacts that *may* be possible)

1. Key features of the clinical placement management systems

The features of each system will be identified, including but not limited to:

- Capacity – mapping and planning
- Placement requests – by education providers
- Placement allocation – using business rules; manual
- Customisable – business rules; removal and addition of fields; terminology; language, time and units of measure; permissions for visibility and editing of custom fields
- Assignment of actions – manually; default settings; bulk actions
- Interface with other systems – data import and export; access via mobile technology; interface with organisational IT systems
- Scheduling – interviews between students and health services
- Communication – SMS; email; social media; bulk; individual

- Web enabled
- Student data – biographical; nomination of placement preferences; placement prerequisites; placement history; attendance; learning objectives; competency; feedback
- Reporting – standard reports; customised reports; historical; real time; future state
- Feedback functions – between supervisors and students; between students and education providers; between education providers and supervisors
- Stakeholder contribution – health service; education provider; student
- Repository, including permissions for viewing – agreements; deeds; schedules; programme information; placement pre-requisites; health service specific information
- Electronic forms – surveys; polls; learning agreements; evaluations; feedback; export; import
- Communication/information access (facilitators, supervisors, students, education providers) – student allocation; placement allocation; supervisor allocation; placement progression
- Delegation – of record keeping (e.g. student attendance)
- Invoicing

2. User experience using a clinical placement management system

Feedback will be sought from those individuals who have direct experience using the clinical placement management system as part of the pilot, including:

- health service providers (including clinical placement managers, facilitators, clinical managers, supervising clinicians)
- students

Evaluation Question	Key Details
Is the clinical placement management system …	
1. Intuitive?	• learning to use the system is easy • learning to use the system requires minimal external input
2. Forgiving?	• errors are difficult to make • errors are flagged and explained • actions can be undone
3. Navigable?	• the system layout is clear • the system layout is logical • the system layout uses consistent patterns • the system supports you to complete each required step for specific processes • data and reports are presented clearly and can be interpreted readily
4. Intelligible?	• the system's functions are readily understood • the system terminology is familiar
5. Efficient?	• the system's functions can be performed in the minimum number of steps • placement management can be performed without undue need for additional systems • upload and download of data between systems is efficient

Evaluation Question	Key Details
Is the clinical placement management system …	
6. Fast?	• the system responds quickly
7. Informative?	• the system provides you with feedback about what is happening when functions are in process
8. Flexible?	• the system's functions are flexible and support diverse and changing need • flexibility can be achieved with little support from the system provider
9. Reliable?	• system 'bugs' and errors are rare • unplanned downtime is minimal and causes limited disruption to operational requirements
10. Supported?	• written 'help' resources support independent resolution of routine questions • timely online or telephone 'help' is available • online or telephone 'help' provides timely resolution of questions/issues • online or telephone 'help' provides satisfactory resolution of questions/issues • users are provided with timely notice of planned downtime • resolution of unplanned downtime is timely

3. Impacts from managing clinical placements using a clinical placement management system *(within the life of the pilot)*

Feedback will be sought from those individuals who have direct experience using the clinical placement management system as part of the pilot, including:

- health service providers (including clinical placement managers, facilitators, clinical managers, supervising clinicians)
- students

Although issues that have relevance to education providers will be considered, direct feedback will not be sought from this group given the limited opportunity for their involvement in the pilot.

Evaluation Question	Key Details
When compared to not using a clinical placement system, when a clinical placement management system is used…	
1. Do health services, education providers and students have more comprehensive and ready access to the range of clinical placement **INFORMATION** relevant to their individual needs?	access to: • available capacity, by location and date – immediate, short, medium, long term • student completion of placement prerequisites • student allocation to wards, shifts, supervisors, facilitators • student location on a particular day and time • student progress towards placement completion • student history of ward placement • placement agreements, deeds, MOUs • placement orientation and introductory information • placement feedback (student →health service, health service → student, student →educator)

Evaluation Question	Key Details
When compared to not using a clinical placement system, when a clinical placement management system is used…	
2. Do health services, education providers and students having access to more **ACCURATE INFORMATION** regarding clinical placements?	reduced errors: • student allocation • orientation details • placement prerequisites • rosters • history of ward placement • location • time • supervisor/facilitator
3. Do health services, education providers and students having access to more **TIMELY INFORMATION** regarding clinical placements?	timely access to: • available placements • allocation of placements • orientation details • placement prerequisites • rosters • location • time • supervisor/facilitator • student placement reports?

Evaluation Question	Key Details
When compared to not using a clinical placement system, when a clinical placement management system is used…	
4. Do health services, education providers and students experience greater levels of **EFFICIENCY** in relation to clinical placement management?	efficiency, measured by subjective assessment of: • relative time taken to allocate placements • relative amount of task duplication • relative amount of multiple handling before completing a task • relative time waiting for assessments • relative time generating required reports • features that save time/take more time/are time neutral
5. Are the responsibilities of clinical placement management better **DISTRIBUTED** across health services, education providers and students?	distributed responsibility, measured by subjective assessment of: • clarity regarding the roles of health services, education providers, and student for managing clinical placements • contributions from health service, education providers, students • responsiveness between health service, education providers, students

6. Is clinical placement capacity **IDENTIFIED** more effectively by health services – including immediate, short term, medium term, and long term?	• immediate and short term
	  ○ daily and weekly availability
	  ○ responding to unplanned staff leave
	  ○ responding to changes to student shifts
	• medium term
	  ○ planning for upcoming placements
	  ○ responding to changes in planning from education providers
	• long term
	  ○ planning for peaks and troughs of patient activity/staff availability
	  ○ responding to changes in planning from education providers

Evaluation Question	Key Details
When compared to not using a clinical placement system, when a clinical placement management system is used…	

7. Is clinical placement capacity **ALLOCATED** more effectively by health services – including immediate, short term, medium term, and long term?	• utilisation of varying capacity
	• immediate and short term
	  ○ daily and weekly availability
	  ○ responding to unplanned staff leave
	  ○ responding to changes to student shifts
	• medium term
	  ○ planning for upcoming placements
	  ○ responding to changes in planning from education providers
	• long term
	  ○ planning for peaks and troughs of patient activity/staff availability
	  ○ responding to changes in planning from education providers

8. Is clinical placement **ACTIVITY** equivalent or greater?	• numbers of students • number of shifts • number of hours • number of student hours • unutilised capacity • rates of completion of feedback forms
9. Is **REPORTING** on clinical placement planning and activity more efficient and effective?	• all mandatory reporting needs are met • all operational reporting needs are met • custom reports can be generated easily using variables of time, location, profession, placement type, education provider etc. • 'value-add' of reporting functions
10. Are the benefits or challenges equivalent for **DIFFERENT CLINICAL PLACEMENT MODELS?**	• variable roster / model placements • block placements

4. Outcomes for clinical placement capacity using a clinical placement system *(perceptions of potential longer term impacts that may be possible)*

Feedback will be sought from health service providers who have direct experience using the clinical placement management system as part of the pilot (including clinical placement managers, facilitators, clinical managers, supervising clinicians).

Evaluation Question	Key Details
When compared to not using a clinical placement system, if a clinical placement management system was to be used over the long term…	
• Do pilot participants believe that utilisation of currently identified clinical placement capacity would increase?	• [To the extent that it is possible, this element of the evaluation will only identify ***perceptions*** of the longer term influence that ***might*** be possible if a clinical placement management system were to be used over an extended period. The findings will need to be treated as speculative only and used with appropriate caution.]
• Do pilot participants believe that overall clinical placement capacity would increase?	
• Do pilot participants believe that overall clinical placement activity would increase?	

APPENDIX C – Baseline data collection

Clinical Placement Management System Pilot

Baseline data – usual clinical placement system

The evaluation of the Clinical Placement Management System Pilot will address each of the four themes listed below.

1. Key features of the clinical placement management systems
2. User experience using a clinical placement management system
3. Impacts arising from managing clinical placements using a clinical placement management system (within the life of the pilot)
4. Outcomes for clinical placement capacity using a clinical placement management system (perceptions of potential longer term impacts that may be possible)

To enable a comparison to be made between USING a placement management system and NOT USING such a system, baseline information on the usual systems and processes used for placement management need to be collected for each of the health services involved in the pilot.

Rather than referring to a particular software system, the word 'system' below is used in the broadest sense of the word and includes the combination of all the tools, processes and procedures you usually use to manage clinical placements.

If a question is not relevant to your health service or the professions involved in your pilot, simply indicate this.

If you have any questions about the questions, please do not hesitate to contact:

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KEY FEATURES OF THE USUAL PLACEMENT MANAGEMENT SYSTEM

1. List and describe each of the tools you usually use to support placement management.

2. Describe the process you usually use to identify placement capacity, including:
    a. immediate and short term availability (e.g. daily and weekly availability; unplanned staff leave; unplanned changes in student shifts)
    b. medium term (upcoming placements; changes in planning from education providers)
    c. long term (known peaks and troughs of patient activity and staff availability; changes in planning from education providers)

3. Describe the usual process of receiving placement requests from education providers

4. Describe the usual process of allocating placements and shifts (where relevant) to students in the context of:
    a. immediate and short term availability (e.g. daily and weekly availability; unplanned staff leave; unplanned changes in student shifts)
    b. medium term availability (upcoming placements; changes in planning from education providers)
    c. long term availability (known peaks and troughs of patient activity and staff availability; changes in planning from education providers)

5. Who is involved and what are their roles in the usual processes of:
    a. capacity planning
    b. receiving requests for placements from education providers
    c. allocating placements

6. Describe the usual roles of the following individuals in relation to placement management:
    a. clinical placement managers
    b. facilitators
    c. clinical managers
    d. clinicians
    e. education providers
    f. students

7. What are the main approaches usually used for communication between clinical placement managers, facilitators, clinicians, education providers, and students regarding placement management?

8. Describe the usual process for written feedback between:
    a. students and supervisors
    b. students and education providers
    c. education providers and supervisors

9. Describe how the usual systems interface with other systems:
    a. within the health service
    b. with the education provider

10. What data items does the usual system provide?

11. What information/reports are readily and efficiently provided by the usual system?

12. What information/reports would be valuable that the usual system can provide, but can't generate efficiently?

13. What information/reports would be valuable that the usual system can't provide?

14. How is student attendance monitored and recorded using the usual system?

15. How is mutually important information usually shared between stakeholders (e.g. agreements, deeds, program information, placement pre-requisites)?

16. How are forms and surveys between relevant stakeholders (e.g. clinical placement managers, students, education providers, clinicians etc.) usually distributed, returned, analysed, and reported on?

YOUR EXPERIENCE OF USING THE USUAL PLACEMENT MANAGEMENT SYSTEM

We're interested to find out about your EXPERIENCE OF USING the USUAL placement system. The questions that follow ask you to rate a number of different concepts that contribute to system usability.

When answering the questions, consider how easy it would be for a new person to learn its processes and functions.

Remember that rather than referring to a particular software system, the word 'system' below is used in the broadest sense of the word and includes the combination of all the tools, processes and procedures you usually use to manage clinical placements. For questions that are relevant to just one or two elements of your system provide responses relevant to these elements.

The questions in this section mirror those being used for the evaluation of experiences using the systems involved in the pilot. As a result, some of the questions may not be directly applicable to your current system and processes. Given this context, the option of 'Not Applicable' is provided for a small number of questions where it is considered that this might be a valid response.

17. Is the usual placement system INTUITIVE?
    a. Learning to use the usual placement system is easy
    b. Learning to use the usual placement system needs limited formal training or reference to documented resources

    Strongly disagree
    Disagree
    Neither agree nor disagree
    Agree
    Strongly agree

18. Is the usual placement system FORGIVING?

- **a.** The design of the usual placement system makes it difficult to make a mistake
- **b.** The usual placement system lets you know if you make a mistake
- **c.** The usual placement system lets you know what the mistake is
- **d.** The usual placement system lets you go back a step
- **e.** The usual placement system lets you undo actions

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

19. Is the usual placement system NAVIGABLE?

- **a.** The layout of the usual placement system is clear
- **b.** The layout of the usual placement system is logical
- **c.** The layout of the usual placement system uses consistent formatting and ways of doing things from one section to another
- **d.** The usual placement system guides you to complete each required step of a process (e.g. scheduling shifts, completing feedback forms)
- **e.** Information is presented clearly and is easy to interpret

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

20. Is the usual placement system readily UNDERSTOOD?

- **a.** Each function of the usual placement system is easy to understand (e.g. scheduling shifts, completing feedback)
- **b.** The terminology the usual placement system uses is familiar

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

21. Is the usual placement system EFFICIENT?

- **a.** The usual placement system's functions can be performed in the minimum number of steps

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

22. Is the usual placement system FAST?

a. The usual placement system responds quickly (i.e. does not leave you waiting for an extended period of time while it processes information)

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable

23. Is the usual placement system INFORMATIVE?

a. If the usual placement system is taking time to process information it lets you know this is happening

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable

24. Is the usual placement system RELIABLE?

a. Placement system 'bugs' and errors are rare
b. Unplanned downtime of the usual placement system is minimal and causes limited disruption to the needs of people using the placement system

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable

25. Is the usual placement system SUPPORTED?

a. Online or documented 'help' information supports you to resolve routine questions independently
b. Online or telephone 'help' is available and timely
c. Online or telephone 'help' provides satisfactory resolution of questions/issues
d. Timely information is provided about planned downtime
e. Unplanned downtime is resolved quickly

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable

IMPACTS FROM USING THE USUSAL PLACEMENT MANAGEMENT SYSTEM

26. Does the usual placement system proved health services, education providers and students ready access to placement information relevant to their needs?

- **a.** available capacity by location and date – immediate and short term
- **b.** available capacity by location and date – medium term
- **c.** available capacity by location and date – long term
- **d.** requests for placements from education providers
- **e.** allocation of placements to education providers
- **f.** allocation of placements to individual students
- **g.** student completion of placement prerequisites
- **h.** student allocation to wards
- **i.** student allocation to shifts
- **j.** student allocation to supervisors
- **k.** student allocation to facilitators
- **l.** student allocation to clinicians
- **m.** student location on a particular day and time
- **n.** student progress towards placement completion
- **o.** student attendance
- **p.** student history of ward placement
- **q.** placement agreements, deeds, MOUs, orientation information
- **r.** placement feedback (student to health service, health service to student, student to educator)

  Yes
  No
  Not required

27. What features of the usual system support timely access to needed information?

28. When using the usual placement system what issues arise that compromise timely access to needed information?

29. What features of the usual system support accurate placement management?

30. When using the usual placement system what issues arise in terms of inaccuracies in placement management?

31. What are the key features of the usual system that support efficient processes for placement management?

32. What inefficiencies in placement management arise when using the usual system?

33. What are the pros and cons of the usual system for managing:

- **a.** placements with a regular pattern of shifts each week (e.g. the same hours on the same days each week, alternating morning and afternoon shifts each week)
- **b.** different hours on different days scheduled by the health service
- **c.** different hours on different days scheduled by the student
- **d.** other

34. What are the greatest strengths of your usual system?

35. What are the greatest weaknesses of your usual system?

BASELINE DATA

Select a period of the same duration and similar in other characteristics to the period of the current pilot. This might be from the same period in 2013, Semester 1 of 2014, or another appropriate period.

36. What was the CAPACITY for student placements during this period? Include data for students studying the same programs as those being included in the pilot. Provide data on:
    a. the total number of placements and their duration in weeks that there was capacity to allocate
    b. the total number of student shifts that there was capacity to allocate
    c. the total number of student hours that there was capacity to allocate

37. What was the ACTUAL student placement ACTIVITY during this period? Include data for students studying the same programs as those being included in the pilot. Provide data on:
    a. the total number of placements that occurred and their duration in weeks
    b. the total number of student shifts that occurred
    c. the total number of student hours that occurred

38. If the capacity was higher than the actual placement activity, or vice versa, what were the reasons for this?

39. What were the rates of completion of feedback forms:
    a. by students
    b. by supervising clinicians

Provide raw data on the number of forms expected and the number of forms completed.

THANKS!
Thank you for contributing to the collection of baseline information for the Clinical Placement Management System Pilot. The information will provide a valuable reference point to contrast the experiences of using a clinical placement management system.

APPENDIX D – Key features of InPlace Network

InPlace Network, by QuantumIT, is a hosted web-based placement software system for *placement providers*. The system is fully integrated with InPlace, a placement system for *education providers*. The InPlace Network web application programing interface also enables real time data exchange with any education provider software. Where an interfacing system is not being used, an xml file can be created to upload data. Similarly, data can be exported to an xml file for import into another system.

Design principles

InPlace Network is designed around the principles that:

- demand is relatively inflexible and supply is relatively flexible,
- systems should be based on real operational data,
- placement availability needs to be known at an aggregate level, which requires terminological alignment,
- educators are responsible for educating and ensuring student welfare, including validating prerequisites; defining education processes, outcomes and assessment standards; maintaining placement data; and defining data visible to health services,
- the burden on health services should be minimised,
- an automated data interface between hospitals and educators is needed to capture regular changes and maintain accuracy,
- reporting must be based on real operational systems, including capacity data from health services, student and enrolment data from educators, and data generated during placements, and
- value must be provided to health services through a configurable assessment reporting structure and an internal reporting records function.

Planning and managing placements

InPlace Network applies a universal workflow involving defining capacity, requesting placements, allocating placements, assigning placements, and monitoring and assessment.

InPlace Network requires the creation of requests and the publishing and acceptance of placements. All other input is optional. Across the different processes, changeable dashboards highlight items needing attention and link from the dashboard for resolution.

Health services define placement capacity

The health service can set capacity for placements across an entire service network, or a single facility, or shift. Capacity is visible and automatically updated as placements are allocated. A "roll-over" function, accommodating weekends and public holidays, replicates capacity for subsequent years and changes to capacity can be made on an ad hoc basis.

Education providers request placements

A request record provides the linkage data connecting the need for a placement to a health service's capacity to provide the placement.

There are three ways education providers can contribute to InPlace Network:

1. InPlace Network supports a data interface through an open web services application programming interface (API) through InPlace or any other education provider placement software. The interface facilitates maintenance of real time data between two organisations from the placement request to the assessment report.
2. An InPlace Network user account can be created for an education provider. Education providers can then create a new request or bulk upload requests to the health service.
3. An education provider can provide a health service with a large volume of requests in an xml file for upload to InPlace Network, or can download requests from another system for upload to InPlace Network by the health service.

Education providers accept requests

A placement request is "offered" within the health service and viewed in a searchable calendar displaying requests against remaining capacity. The health service confirms some or all placements and then "publishes" the placements to the education provider for acceptance or rejection. Publishing can occur by email or education providers with a user account can view published placements awaiting acceptance by logging into InPlace Network.

The process can also be performed in a short flow cycle. A real time request between an education provider using InPlace and a health service using InPlace Network can be received, reviewed, allocated and published in a couple of minutes. The functions support an automated process to map requests to available capacity, and provide a visual model to assist health services allocate placements in response to requests.

Rules can be used to specify which facilities, disciplines or placement types an education provider can request placements from.

Where an education provider is not using an interfacing system, the health service can export placement details into an xml file to support bulk upload into an education provider's system.

Education providers allocate students to placements

When using interfacing software, the education provider can accept placements published by the health service and allocate students to placements in bulk or manually. Alternatively, student details can be loaded by the education provider via an xml or csv importer.

The health service can then view a calendar of placements with the student and their organisation's name displayed. Placements without a student are highlighted.

Student details are added by the education provider and can be viewed by the health service. The system collects basic personal information; contact information, a photograph, pre-requisite information defined by the health service but provided by the education provider, placement details, and supervisors allocated by the health service and the education provider.

Placement management, monitoring and assessment

InPlace Network includes the means to record placement attendance, make notes in the student record or individual placement, and manage assessment information.

InSight is a survey and assessment module enabling custom building and automatic distribution of surveys and collection of survey data from defined groups. Results are collated and an overall score/response provided for each question. Results can be exported to csv, PDF, Excel, text or image files.

Customisable functions

Customisable functions include:

- roles of personnel,
- geographical organisation of facilities,
- disciplines,
- placement types, prerequisites, requirements,
- agency type,
- year level,
- rules for education providers as to what requests can be made to which facilities,
- education provider campus,
- shift start/finish times for each facility down to the ward and discipline within a ward,
- days of the week for standard shift patterns, and system roles to determine levels of access and read/write ability within the system.

Facilities, wards, departments and specification of associated personnel can be created.

Terminology is controlled via the configuration pages. Entities can be enabled, disabled, and renamed (e.g. disciplines, prerequisites, education providers).

Communication functions

InPlace Network provides the means to create templates for automatic emailing to education providers for placement allocation, cancellation, withdrawal and rejection, and supervisor allocation. Emails can be sent automatically after an action, or at any time, to an individual or in bulk. The "preview and send" function enables editing of individual emails before sending.

InPlace Network does not have SMS functionality or the means to schedule interactions between individuals. Although there is no social media interface, this can be implemented.

Repository functions

InPlace Network does not have a direct document repository function. Document storage could be added, either as direct loads in the database or with links to an external repository.

Reporting

A range of reporting functions are available, including requests, placements, placement allocation against capacity, and placement allocation to each education provider relative to requests. Filters include dates, status, education provider, facility, level in the organisation, discipline, placement type, and year level. Reports can be exported in csv format.

The InPlace Query Tool can be ported to InPlace Network, enabling the user to build queries and extract data. Data can be filtered, sorted, and output to Excel, Word, PDF, xml etc.

Data access and contributions by stakeholders

Permissions allow control over different parts of the application. Each page of the application corresponds to a security module for which read only or edit permissions can be granted. Data visible to each user is determined by their individual security profile which can be managed by region, facility or discipline.

The required inputs are the creation of requests and the publishing and acceptance of placements, beyond this all other input is optional.

Health service placement coordinators can create and manage capacity, respond to requests and allocate placements, manage student information, administer placements, add supervisors and student prerequisites, view reports, and create invoices.

Health service administrators can change the system's configuration, including creating new health services, user accounts, email templates, and surveys; as well as creating and managing supervisor rosters.

Supervisors have their own dashboard displaying roster information and student information for assigned placements. They can add or update prerequisite information.

Education providers can create requests through an integrated system, a user interface, or file upload. They can upload or create student records, allocate students to placements, view placement information, add academic supervisors, and manage prerequisites. They must also acknowledge a placement offer by accepting or rejecting it.

Student interaction is generally with or via the education provider except where students directly apply to the health service for a placement.

Invoicing

Users can define agreements with each education provider by discipline and facility, using default costs per day or hour, with the placement cost calculated automatically. Placements can be picked individually or in bulk and a cost applied to each placement or group of placements. Invoices can be exported as a csv file to load into another system or as a PDF.

Figure D1. Review Capacity screen shot from InPlace Network

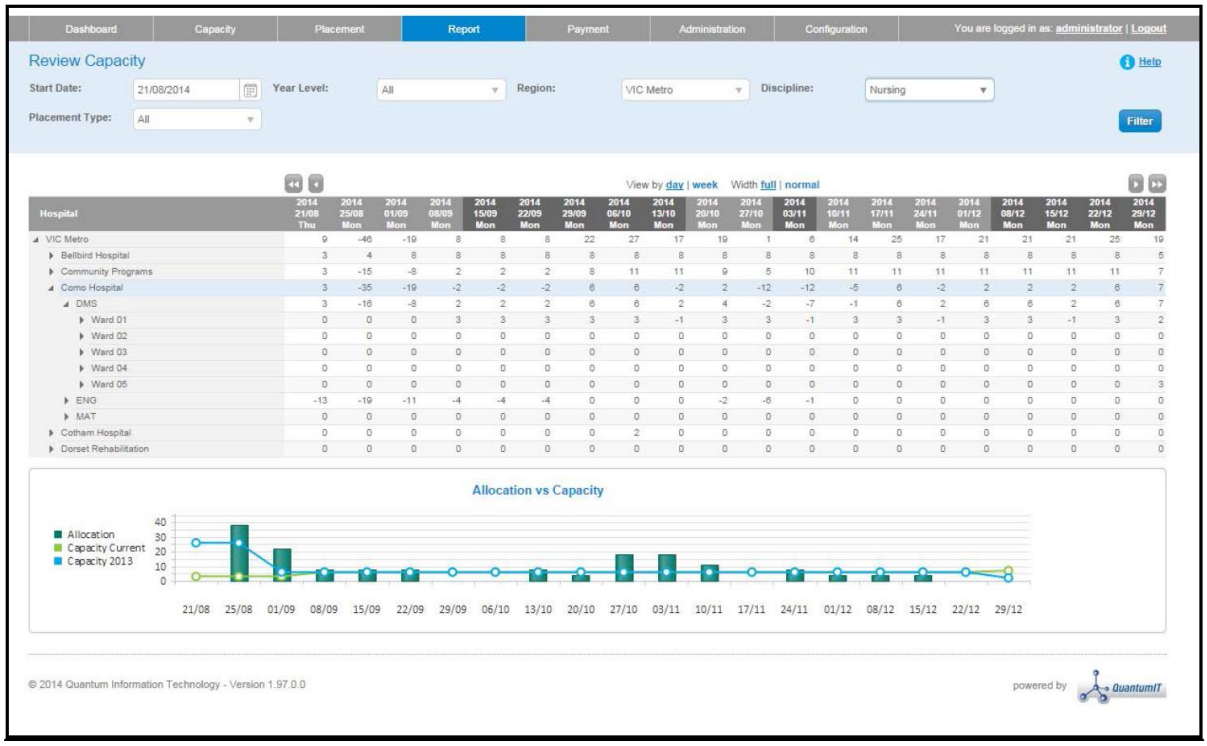
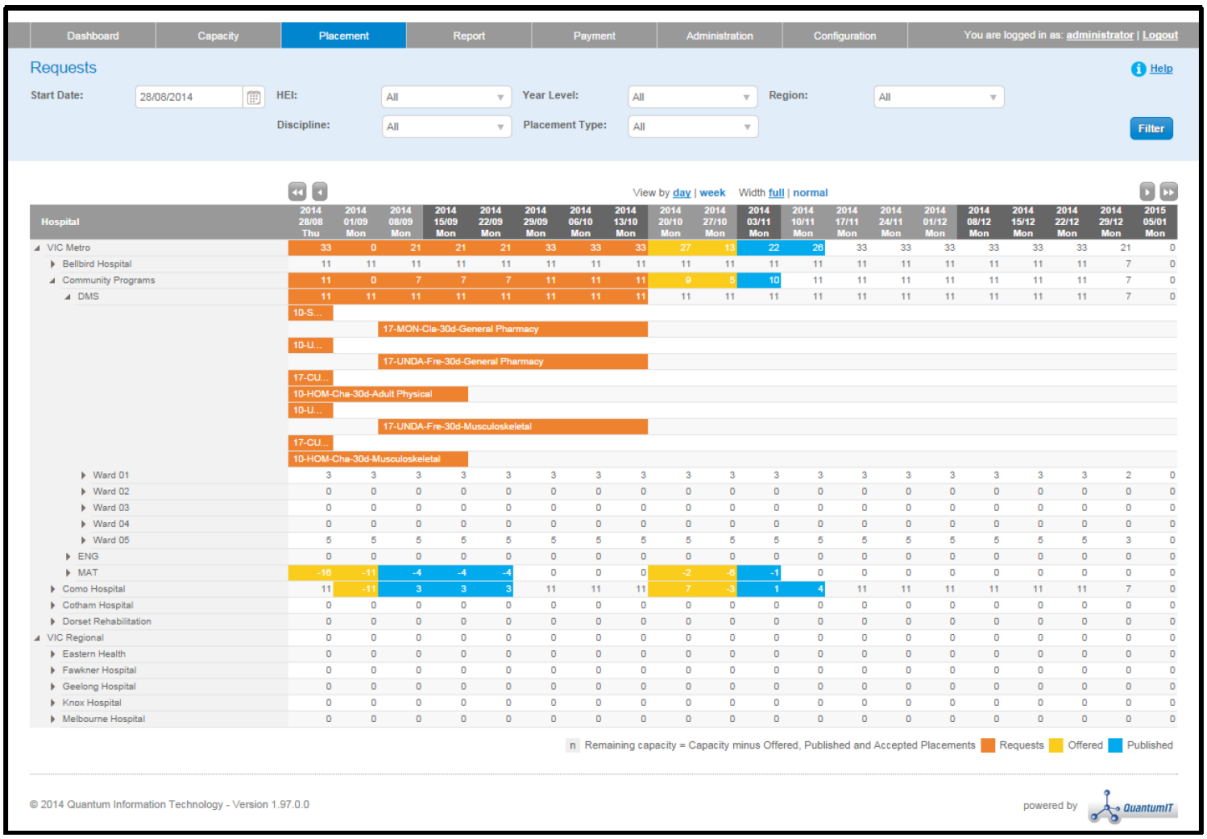


Figure D2. Requests screen shot from InPlace Network



APPENDIX E – Key features of Sonia Central

Sonia Central, by Planet Software, is a hosted web based placement software system for *placement providers*. Using a web application programming interface, Sonia Central is fully integrated with Sonia Online, a placement system for *education providers*. Through this interface, Sonia Online data is read in real-time from the education provider systems for display/use in Sonia Central. Education providers that do not use Sonia Online can also upload information to Sonia Central using a CSV file via a dedicated login, providing immediate access to the new information.

Design principles

Before Sonia Central was developed, if an education provider used Sonia Online, health services could access relevant placement information through a dedicated log in. For health services providing placements to multiple education providers, a separate log in was required for each education provider. Sonia Central provides the means to interact with multiple education providers that use Sonia Online in the one place. The aim in integrating this information was for the health service to see all relevant data in the one place, save time and reduce errors.

Sonia Central has the additional functionality of capacity planning and management.

Sonia Central was designed to be usable by people 'on the move'. As a cloud hosted web application it can be viewed from anywhere with a web browser and internet access. Although ideally suited to tablets and desktop systems, it can be viewed on a smartphone.

Planning and managing placements

Planning and management of placements using Sonia Central involves the health service defining capacity, the education provider making placement requests, the health service accepting or declining placements, and the education provider allocating students to confirmed placements.

Health services define placement capacity

Health services can define capacity at a level appropriate to them, against a ward, a shift or discipline. Overall capacity of a ward or discipline might be defined at a specified level within the health service (e.g. discipline senior or ward manager) but another role may use the high level figure to further define capacity against days, shifts or student year level.

Capacity can be entered in bulk for a specified date range, and targeting particular days of the week and then can be modified using views of individual days, weeks or months. The process

of bulk assignment occur at multiple levels, i.e. various nodes in the organisational hierarchy, against specific disciplines, and/or specific shifts.

Education providers request placements

Education providers use Sonia Online to define their placement requests. Sonia Central then shows these requests to the health service, allowing them to make decisions on capacity. Education providers can be provided with a limited login to the hospital's Sonia Central site which allows them to view defined capacity information. This function assists them to make more realistic placement requests.

Education providers that do not use Sonia Online can be given the means to log in to the health service's Sonia Central site and upload placement information using a CSV file.

Health services accept requests

To assist allocation of placements, through Sonia Central the health service has access to an aggregated view of all placement requests from each education provider that uses Sonia Online against health service placement capacity. Having viewed placement requests, the health service manually confirms the placements that will be accepted.

Education providers allocate students to placements

Education providers allocate students to confirmed placements through Sonia Online. Sonia Online includes student biographical information, student nominations of placement preferences, and placement prerequisites required and fulfilled. Health services using Sonia Central can view and contribute to this information via the Sonia Online link integrated into Sonia Central. The education provider executes control over which information the health service can and cannot access through Sonia Central.

Placement monitoring, management and assessment

When given appropriate access through Sonia Central, health services can view and contribute to Sonia Online functions in relation to placement history, attendance records, learning objectives, and competency assessments and feedback.

Through Sonia Central, health services can access the Sonia Online functions for electronic forms for functions such as surveys, polls, learning agreements, evaluations, and feedback.

Tracking of hours and attendance is available via Sonia Online and the role for completing this information is defined through the configuration of user settings.

Customisable functions

Customisable functions include:

- defining education provider Sonia Online web addresses to direct Sonia Central to where it needs to connect,
- defining logins for users of Sonia Online,
- defining logins for other education providers that do not use Sonia Online but need to upload placement information to Sonia Central,
- text mappings that enable the health service to map varying terminology from diverse education providers to the specific terminology used by the health service providing access to consistent and familiar terms across the data set,
- organisational structure,
- users,
- roles,
- language (e.g. English, Italian, Chinese),
- culture (e.g. date formats),
- lists such as disciplines, levels, shifts and user types,
- terminology including default wording for disciplines, the organisation, etc. that can be aliased with replacement terms,
- email templates, and
- within tables, the option to hide, show, reorder, sort or group specific information, with preferences retained on a user by user basis.

Communication functions

Through Sonia Central, health services have access to individual and bulk email functions.

Health services can define interview schedules, and students can request interview slots. Health services, student, external supervisors and education providers can all define and upload documents and notes for other parties to see. Students, external supervisors and health services can view details regarding the health service placements relevant to them. Education providers can also be provided with a login to Sonia Central to see information such as capacity.

Repository functions

Sonia Central does not have a document repository function but provides access to this function within Sonia Online. When given relevant access and permission, Sonia Central users can access and contribute to the upload of agreements, deeds, schedules, programme information, placement pre-requisites, health service specific information etc.

Reporting

Sonia Central provides six real-time reports that make use of the current data from education providers to show comparisons against capacity, placement details, student details, and high level aggregations that show graphically how capacity contrast to placement confirmations and allocations. The reports in Sonia Central are expected to grow based on user requests.

Sonia Online provides additional reports that are available to users that are specific to the placements of a particular education provider.

All the views of data within Sonia Central allow exporting to both Excel and PDF. All reports allow output to PDF, CSV, Excel, Rich Text Format, TIFF, and Web Archive.

Data access and contributions by different stakeholders

Sonia Central can be configured in diverse ways to respond to the needs of organisations of different sizes. The hierarchy allows for global definitions downwards, but use from a state health level is more realistic from a legislative perspective. If used at a state level it is envisaged that a dedicated copy of Sonia Central would be installed on an organisation's own hardware (probably in the cloud). The health service can then administer the system to define their hierarchy, and the various roles, users and permissions needed. Sonia Central provides control over permissions of who can see and edit what information within the system. These permissions are defined as 'roles' and then roles are assigned to users.

Education providers using Sonia Online provide logins so placement data can be pulled into Sonia Central. Non-Sonia education providers contribute by uploading relevant data.

Students do not use Sonia Central as they have logins to the university Sonia Online system to track and manage their needs in one place for their whole education experience.

Invoicing

Sonia Central does not include an invoicing function.

Figure E1. Screen shot showing the Placement List on Sonia Central

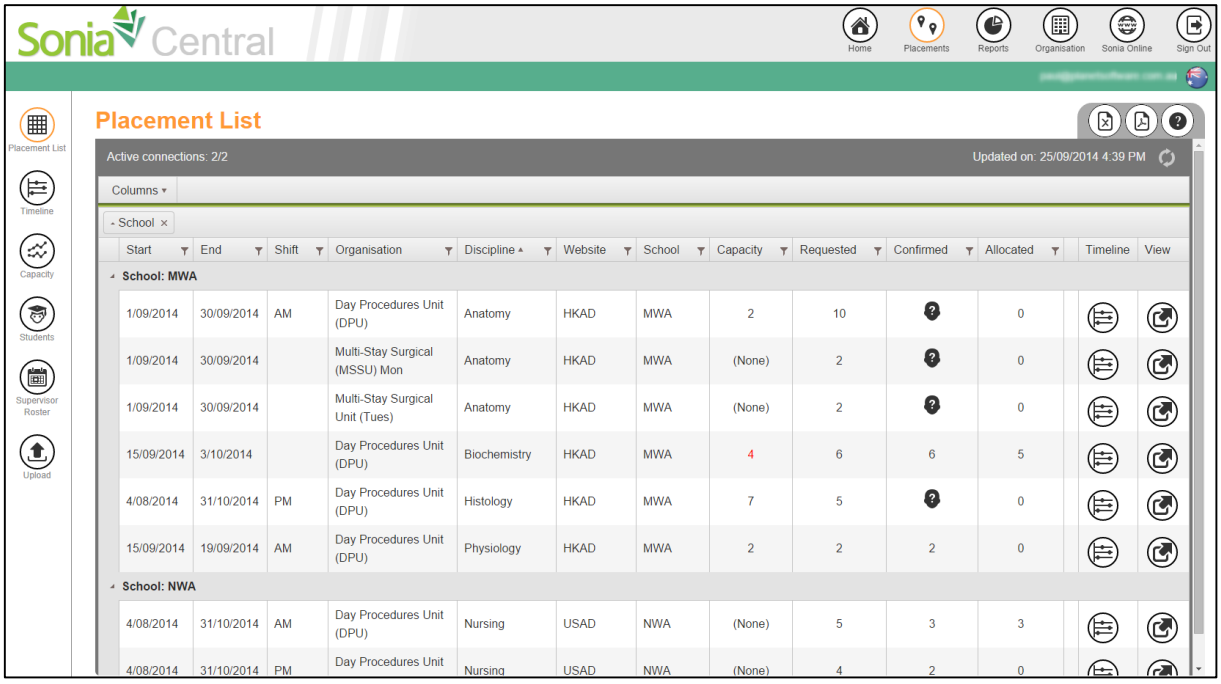
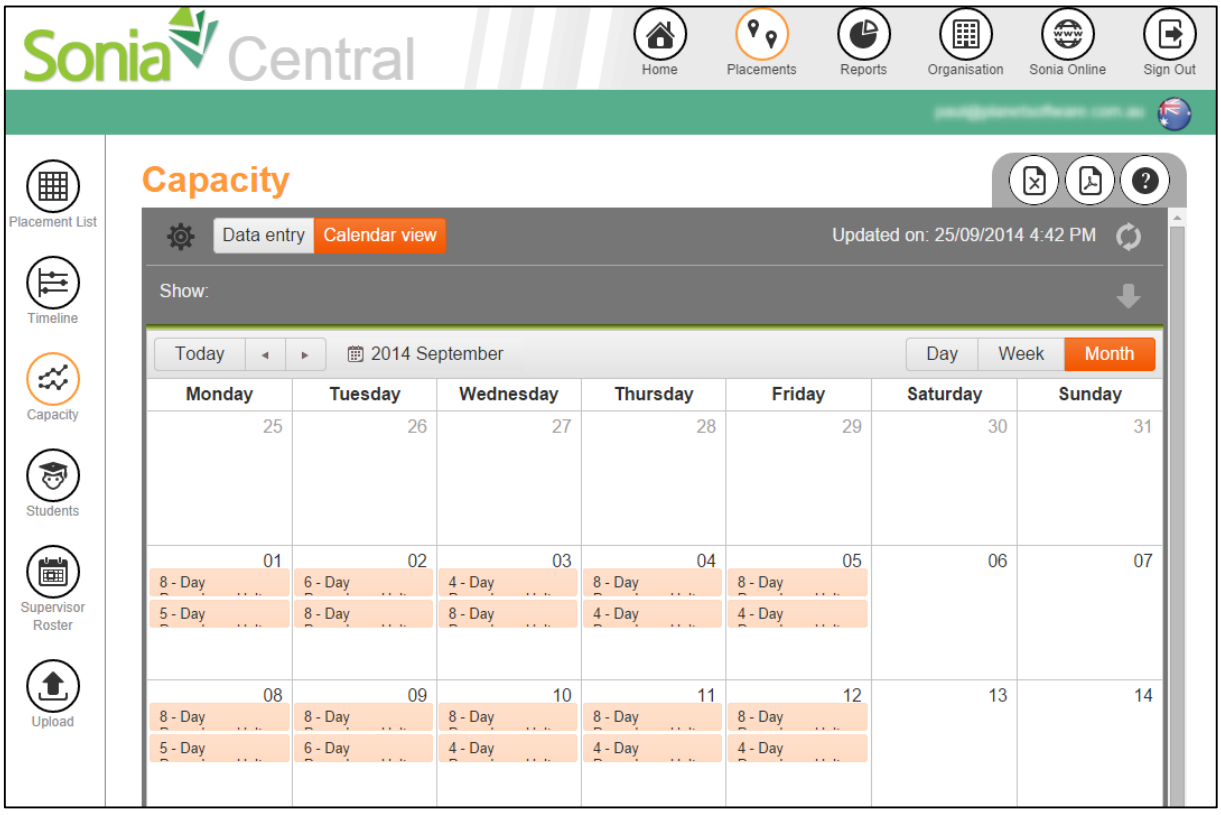


Figure E2. Screen shot showing the Calendar view of Capacity on Sonia Central



APPENDIX F – Key features of SPOT

SPOT, by Mater Health Services, is a hosted web-based placement management system for *health services* and *education providers*. SPOT interfaces with other systems via a web application programming interface customisable to the specific system. Data can be exported from other systems into SPOT and exported from SPOT for upload to other systems.

Design principles

SPOT is designed around the principles of:

- providing a central information hub for all stakeholders involved in placements in a particular facility, including health service staff, education provider staff and students,
- 'bottom-up' data collection, involving entry of all data through operational use, and
- being as easy to use as internet banking, providing an intuitive process where multiple stakeholders perform small but regular tasks.

SPOT is accessible via, and compatible with, mobile web-enabled devices through a web browser.

Planning and managing placements

Planning and management of placements using SPOT involves the health service defining capacity, the education provider making placement requests, the health service accepting or declining placements, and the education provider allocating students to accepted placements.

A user's dashboard provides prompts for required actions such as requests needing decisions, uploading of student details, assignment of students to areas and supervisors to students, completion of feedback forms, and hours completed against hours required.

Health services define placement capacity

The health service sets capacity by the number of students per area or team for each shift. Shift capacities can then be further broken down by discipline, by student year level, and/or education provider. Shift capacities can be supplemented by assigning a maximum number of students on concurrent placements per area or team. There are no prescribed timeframes meaning that placement coordinators can plan for any time period they see fit.

Education providers request placements

Education providers access SPOT via their own log in and request placements through a request "Wizard" using a four step process:

- uploading, or selecting a previously uploaded, agreement with the placement provider,
- entering the placement details, including number of students, start and end date, number of hours required, program of study etc.
- uploading, or selecting previously uploaded, placement documents to be shared with the health service or students, and
- submitting the placement request.

Health services accept requests

Once the education provider has submitted placement requests, the health service is prompted to accept or decline the request. The health service allocates placements against the previously mapped capacity. Remaining capacity is updated in real time as placements are accepted.

Education providers allocate students to placements

If accepted, the education provider can assign individual students to the placement.

Student details can be uploaded or updated either individually through a manual process or using bulk upload, including using data exported from other systems such as an education provider enrolment system.

SPOT requires four pieces of information to create a student profile: email address, student name, student number, and program of study. Additional student data is determined by each client and can be set as mandatory (e.g. placement prerequisites etc.) or optional (placement preferences etc.) and provides an opportunity for education providers and health services to share as much information as they deem necessary.

The allocation of individual students to specific areas within the health service can be conducted by the health service, or the health service can allocate a number of *spots* in specific areas to the education provider, who can then allocate individual students to them.

A student can be allocated to multiple areas concurrently or in a rotational model in a single placement. Currently students are manually allocated to areas within a health service. A placement simulator module allows students to be automatically assigned to areas based on business rules but currently this module only 'simulates' for planning purposes.

Placement management, monitoring and assessment

The health service can assign supervisors to students either individually, shift by shift; using a default setting with a particular supervisor automatically applied in a particular area; or in bulk by assigning a specific supervisor to an individual student for a whole placement or part thereof.

Rostering student shifts can be done individually shift by shift or in bulk using shift templates and weekly patterns. SPOT also provides the option for students to schedule and manage their shift rosters. When using this function, the specified shift capacities control the shifts available for students to access.

Student placement data, such as history, attendance, and learning objectives, is collected through day-to-day operations and remains accessible to relevant stakeholders one the placement is completed.

SPOT has four types of feedback functionality with content that can be customised. These include a supervisor feedback form, a student feedback form, an end of placement evaluation form for completion by students, and a notes section for free form comments against a student profile that can be public for all relevant users, or private for selected users only. Supervisor and student feedback forms can be enabled/disabled for each placement group and generated per shift or to a set timeframe. Both these forms can be accessed by all participants that have access to the student profile, including managers, education providers and coordinators.

Customisable functions

Customisable functions include:

- a facilities organisational structure,
- the grouping of shifts and setting capacities,
- the narrow or broad defining of student groups and disciplines of study,
- the number and type of documents required/displayed per placement,
- the type of student details collected/required for placement,
- student self-rostering or rostering by area managers, shift by shift or via shift templates,
- supervisor self-assignment to students or assignment by managers/coordinators,
- the monitoring of feedback form use, including frequency, user type and content, and
- reports which are built according to each client's specifications.

Customisable functions relating to user access are controlled by assigning each user one or more roles they can perform in specific areas of SPOT, for specified disciplines, and specified education providers.

Communication functions

SPOT provides automated emails advising users of actions performed regarding their placements. It can also obtain bulk group email addresses of specified user groups to send emails to and the ability for administrators to create announcements for specified user groups.

SPOT currently has no dedicated interview functionality. However, the system would allow users to designate an interview area with scheduled available timeslots (capacity) allowing the health service to set and allocate interview times.

Repository functions

Document files can be uploaded and attached to placement requests and/or individual student profiles by education providers and health services. Documents can be marked as public or private to enable visibility to relevant users.

Reporting

Data is reported in real time via interactive, filterable, reports in graphs and tables, customised for each client. Examples include placement activity overview; placement calendar of students accepted across different areas; student shifts booked overview, according to various business rules to assist in planning; student evaluation report showing aggregated results of student evaluations of their placement; shift activity showing number of shifts and feedback forms, in total and by area, completed by students and supervisors; student attendance record including reasons for absences; and capacity calendar showing numbers of placements/shifts booked against the set capacities using a graphical format

Data access and contributions by different stakeholders

SPOT has nine user roles within two categories of Health Service Staff (Director, Manager, Rostering Manager, Supervisor, Self-Assigning Supervisor and Administrator), and Education Provider Staff (Staff, Student and Facilitator).

Contributions are required from the Health Service Staff (Director) who sets and edits capacity, accepts/declines placement requests and allocates placement areas, and the Education Provider who submits placement requests and uploads student details to accepted placements. All other functions are optional. Examples include setting mandatory student details (Director); assigning supervisors to students (Director, Manager), editing student rosters (Director, Rostering Manager); editing student attendance (Supervisor); assigning student facilitators (Education Provider); viewing facilitator reports (Facilitator) and uploading custom reports (Administrator).

Delegation of functions to particular roles is controlled via user profiles and configuration items, allowing allocation of different functionality depending on the placement model. For example, students can be assigned to self-roster or view-roster-only. Editing student rosters can be set as the function of a Rostering Manager and/or a Director in combination with or without student rostering involvement.

Invoicing

Invoices can be generated using any of the placement variables or other data collected. Invoices are created via the reporting functionality as PDFs that can be exported for a client's accounting records and attached to placement requests in SPOT.

Figure F1. Screen shot from the SPOT Student Dashboard

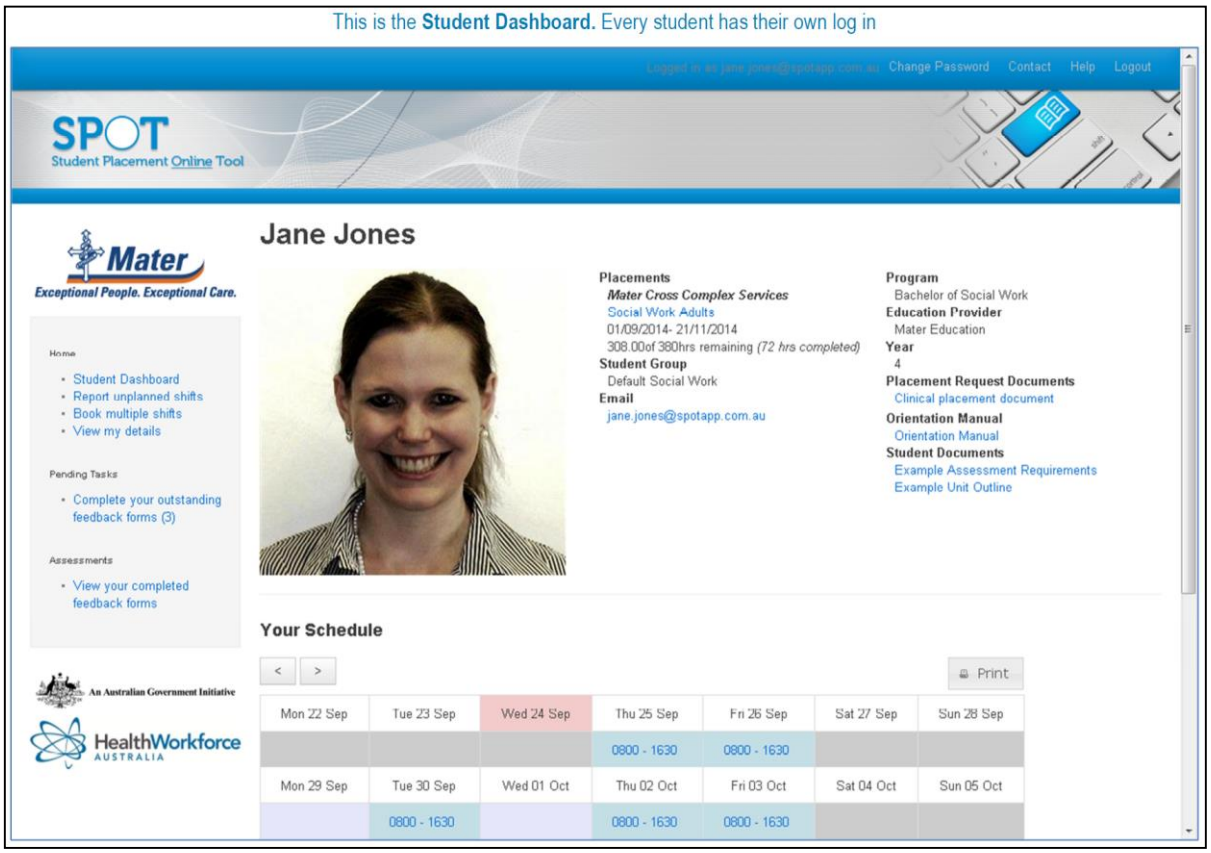
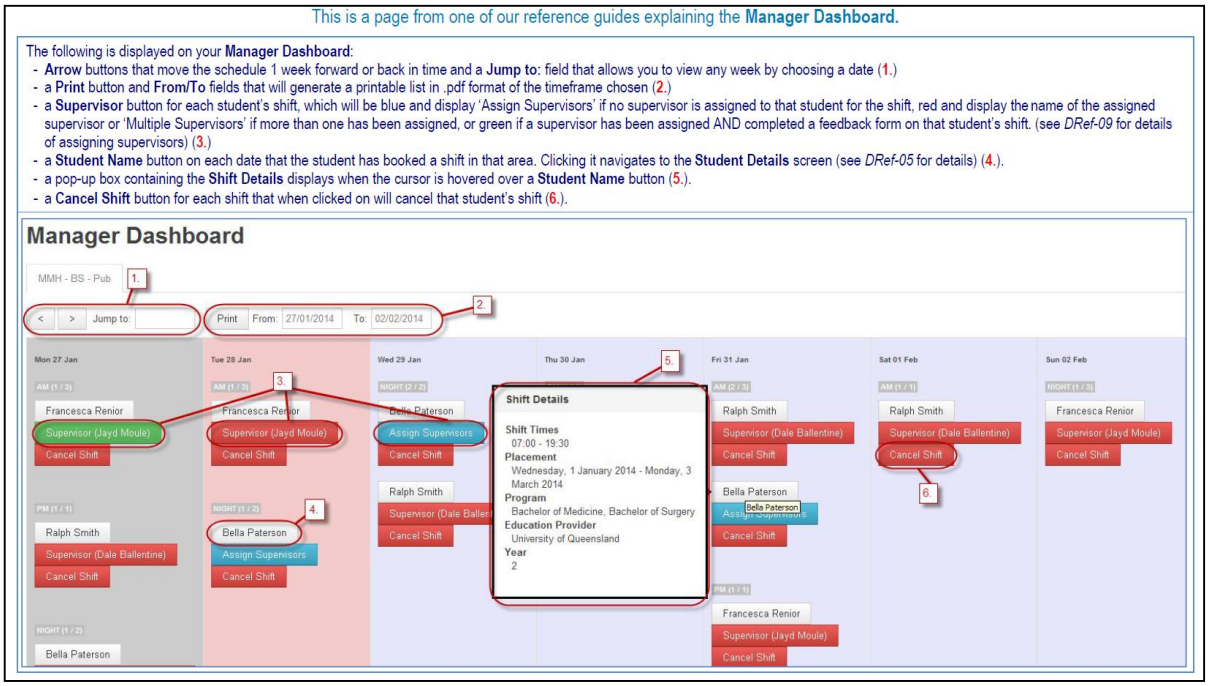


Figure F2. Screen shot from SPOT reference material displaying the SPOT Manager Dashboard



APPENDIX G – Log of issues and insights

Clinical Placement Management System Pilot

Log of Issues and Insights

Date	**Name and role** *(using the CPMS)*	**Issue category** 1. Feature/s or functioning of CPMS 2. Capacity management 3. User experience 4. Relationships and communication 5. Data 6. Other	**Details** - Capture both positive and problematic issues and insights - Capture the implications of the issues and insights - Describe the issues and insight so they can be understood by someone not directly involved - For issues requiring support from the software provider, capture the time taken to achieve a resolution, usefulness of the support provided, and whether the issue was satisfactorily resolved

APPENDIX H – Post-pilot online survey of students

BACKGROUND

The Queensland Clinical Education Training Council is currently running a pilot of three different Clinical Placement Management Systems.

The aim of the pilot is to shed light on whether using a clinical placement management system improves the efficiency of capacity planning and placement management for clinical placements, when compared to not using a clinical placement management system.

Three hospitals are participating in the pilot, The Wesley Hospital, Pindara Private Hospital, and the Townsville Hospital and Health Service. Each of these hospitals is piloting one clinical placement management system; SPOT, Sonia Central, and InPlace Network, respectively.

The evaluation of the pilot and the final report that is produced will be informed by:

- data from the clinical placement management systems,
- a log of issues and insights kept by each hospital,
- post-pilot surveys of health service staff and students, and
- post-pilot interviews with key health service staff.

To the extent that it is possible, this information will be compared to available baseline data and information.

Survey of staff and students
This survey should only take about 20 minutes to complete. The survey will stay open until 8pm on Friday 31 October 2014.

The survey focuses on finding out about your experiences of how easy the placement system is to use and the impacts of using the placement system on you filling the responsibilities of your role. You may have used many features of the placement system, or just one or two. Either way, answer the questions based on how you have found the functions you have used. You don't need to have used every feature of the system to have useful information to contribute.

Confidentiality
Your responses to the survey will be kept completely confidential. No information that could identify you will be included in the report.

Only the project team (Ms Gretchen Young – Young Futures & Dr Jeanette Kennelly – Inspiravision) will have access to your survey responses.

Enquiries
If you have any questions about the survey, please do not hesitate to contact either:

Gretchen Young
Young Futures
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OR

Ian Harris
Project Manager, Placement Systems Pilot
Queensland Clinical Education & Training Council
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www.qrtn.com.au

A LITTLE ABOUT YOU

1. What is your role in the context that you used the placement system?

   Student - Registered Nurse
   Student - Enrolled Nurse
   Student - Physiotherapist
   Student - Occupational Therapist
   Student – Pharmacist

2. At which hospital was your placement?

   Townsville Hospital and Health Service
   Pindara Hospital
   Wesley Hospital

3. How many weeks was your placement?

   1
   2
   3
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14
   >14

4. What type of placement schedule did you have?

   The same hours on the same days each week
   Different hours on different days, scheduled by the hospital
   Different hours on different days, scheduled by yourself

5. Have you used an online placement system before this placement?

   No
   Yes - SPOT
   Yes – InPlace Network
   Yes - Sonia Central/Sonia

6. For how many weeks have you used the current placement system as part of this current pilot?

   1
   2
   3
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14

YOUR EXPERIENCE OF USING THE PLACEMENT MANAGEMENT SYSTEM

We're interested to find out about your EXPERIENCE OF USING the placement system. The questions that follow ask you to rate a number of different concepts that contribute to system usability.

It doesn't matter if you used just one function of the placement system, or many. Try to make a judgement based on the extent of the experience you have had. If you only used the placement system to complete feedback forms, rate your experience of how easy it was to do this. If you used the placement system for giving feedback, receiving feedback, scheduling shifts, changing shifts etc., rate your experience for this combination of functions.

At the end of this section there is the opportunity to make general comments about the system's usability.

7. Is the usual placement system INTUITIVE?

- **a.** Learning to use the placement system is easy
- **b.** Learning to use the placement system needs limited formal training or reference to documented resources

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

8. Is the placement system FORGIVING? If you did not experience a particular concept, select 'I don't know'

- **a.** The design of the placement system makes it difficult to make a mistake
- **b.** The placement system lets you know if you make a mistake
- **c.** The placement system lets you know what the mistake is
- **d.** The placement system lets you go back a step
- **e.** The placement system lets you undo actions

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I don't know

9. Is the usual placement system NAVIGABLE?

- **a.** The layout of the placement system is clear
- **b.** The layout of the placement system is logical
- **c.** The layout of the placement system uses consistent formatting and ways of doing things from one section to another
- **d.** The placement system guides you to complete each required step of a process (e.g. scheduling shifts, completing feedback forms)
- **e.** Information is presented clearly and is easy to interpret

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

10. Is the placement system readily UNDERSTOOD?

- **a.** Each function of the placement system is easy to understand (e.g. scheduling shifts, completing feedback)
- **b.** The terminology the placement system uses is familiar

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

11. Is the placement system EFFICIENT?

- **a.** The placement system's functions can be performed in the minimum number of steps

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

12. Is the placement system FAST?

- **a.** The placement system responds quickly (i.e. does not leave you waiting for an extended period of time while it processes information)

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

13. Is the placement system INFORMATIVE?

- **a.** If the placement system is taking time to process information it lets you know this is happening

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

14. Is the placement system RELIABLE?

- **a.** Placement system 'bugs' and errors are rare
- **b.** Unplanned downtime of the placement system is minimal and causes limited disruption to the needs of people using the placement system

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

15. Is the placement system SUPPORTED? If you did not experience a particular concept, select 'I don't know'

- **a.** Online or documented 'help' information supports you to resolve routine questions independently
- **b.** Online or telephone 'help' is available and timely
- **c.** Online or telephone 'help' provides satisfactory resolution of questions/issues
- **d.** Timely information is provided about planned downtime
- **e.** Unplanned downtime is resolved quickly

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

16. Do you have any other comments about the usability of the placement system?

IMPACTS FROM USING A PLACEMENT MAANGEMENT SYSTEM

The following questions explore the IMPACTS of using a placement system compared to when a placement system isn't used.

Again, it doesn't matter if you used just one function of the placement system, or many. Try to make a judgement based on the extent of experience you had.

17. Rate the impact of using a placement system on meeting your INFORMATION needs compared to not using a placement system

- **a.** Access to the RANGE OF INFORMATION needed for my role is...
- **b.** Access to ACCURATE INFORMATION needed for my role is...
- **c.** Access to TIMELY INFORMATION needed for my role is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

18. Rate the impact of using a placement system on the EFFICIENCY of fulfilling your placement management responsibilities compared to not using a placement system

a. EFFICIENTLY completing my placement management responsibilities is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

19. Rate the impact of using a placement system on the clarity of your ROLE in managing placement responsibilities compared to not using a placement system

a. Clarity regarding MY ROLE in managing placement responsibilities is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

20. The pros and cons of using a placement system may vary across different clinical placement models (e.g. block placements, placements of variable shifts etc.). Having used this placement system, what observations would you make about using the placement system across different placement models?

FINAL THOUGHTS

21. What is your overall assessment of using this placement system?

Very beneficial
Slightly beneficial
Neutral
Slightly onerous
Very onerous

22. Is there anything else you would like to tell us about using the placement system in this pilot?

THANK YOU!

Thank you for generously sharing your time and experiences to contribute to this project.

Your participation will make an important contribution to understanding approaches to clinical placement management.

The findings from this survey will be integrated with data from a range of other sources. This information will inform a report for the Queensland Clinical Education Training Council. The report will be available towards the end of 2014.

If you have any questions or issues you would like to discuss about this project, please contact:

Gretchen Young, Young Futures
0434 357 721 gretchen@youngfutures.com.au
www.youngfutures.com.au

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APPENDIX I – Post-pilot online survey of health service staff

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Three hospitals are participating in the pilot, The Wesley Hospital, Pindara Private Hospital, and the Townsville Hospital and Health Service. Each of these hospitals is piloting one clinical placement management system; SPOT, Sonia Central, and InPlace Network, respectively.

The evaluation of the pilot and the final report that is produced will be informed by:

- data from the clinical placement management systems,
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- post-pilot surveys of health service staff and students, and
- post-pilot interviews with key health service staff.

To the extent that it is possible, this information will be compared to available baseline data and information.

Survey of staff and students
This survey should only take about 20 minutes to complete.

The survey focuses on finding out about your experiences of how easy the placement system is to use and the impacts of using the placement system on you filling the responsibilities of your role.

Confidentiality
Your responses to the survey will be kept completely confidential. No information that could identify you will be included in the report.

Only the project team (Ms Gretchen Young – Young Futures & Dr Jeanette Kennelly – Inspiravision) will have access to your survey responses.

Enquiries
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OR

Ian Harris
Project Manager, Placement Systems Pilot
Queensland Clinical Education & Training Council
0417 359 643 ian.harris@jcu.edu.au www.qrtn.com.au

A LITTLE ABOUT YOU

1. What is your role in the context that you used the placement system?

Clinical placement manager
Clinical education facilitator
Clinical manager
Clinical nurse or registered nurse
Physiotherapist
Occupational therapist
Pharmacist
Other (please specify)

2. At which hospital do you work?

Townsville Hospital and Health Service
Pindara Hospital
Wesley Hospital

3. Have you used an online placement system before this placement?

No
Yes - SPOT
Yes – InPlace Network
Yes - Sonia Central/Sonia

4. For how many weeks have you used the current placement system as part of this current pilot?

1
2
3
4
5
6
7
8
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11
12
13
14

5. What type of placement schedule/s does your health service/discipline offer?

The same hours on the same days each week
Different hours on different days, scheduled by the hospital
Different hours on different days, scheduled by the student
Other (please specify)

6. What type of placement schedule/s have you been involved with while using the placement system?

The same hours on the same days each week
Different hours on different days, scheduled by the hospital
Different hours on different days, scheduled by the student
Other (please specify)

YOUR EXPERIENCE OF USING THE PLACEMENT MANAGEMENT SYSTEM

We're interested to find out about your EXPERIENCE OF USING the placement system. The questions that follow ask you to rate a number of different concepts that contribute to system usability.

It doesn't matter if you used just one function of the placement system, or many. Try to make a judgement based on the extent of the experience you have had. If you only used the placement system to complete feedback forms, rate your experience of how easy it was to do this. If you used the placement system for giving feedback, scheduling shifts, changing shifts etc., rate your experience for this combination of functions.

At the end of this section there is the opportunity to make general comments about the system's usability.

7. Is the usual placement system INTUITIVE?

a. Learning to use the placement system is easy
b. Learning to use the placement system needs limited formal training or reference to documented resources

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

8. Is the placement system FORGIVING? If you did not experience a particular concept, select 'I don't know'

a. The design of the placement system makes it difficult to make a mistake
b. The placement system lets you know if you make a mistake
c. The placement system lets you know what the mistake is
d. The placement system lets you go back a step
e. The placement system lets you undo actions

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I don't know

9. Is the usual placement system NAVIGABLE?

a. The layout of the placement system is clear
b. The layout of the placement system is logical
c. The layout of the placement system uses consistent formatting and ways of doing things from one section to another
d. The placement system guides you to complete each required step of a process (e.g. planning capacity, allocating placements, scheduling shifts)
e. Information and reports are presented clearly and are easy to interpret

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

10. Is the placement system readily UNDERSTOOD?

a. Each function of the placement system is easy to understand (e.g. scheduling shifts, completing feedback, planning capacity, allocating placements)
b. The terminology the placement system uses is familiar

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

11. Is the placement system EFFICIENT?

- **a.** The placement system's functions can be performed in the minimum number of steps
- **b.** Placement management can be performed without undue need to additional systems
- **c.** Upload and download of data between the placement system and other related systems is efficient

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable to my role

12. Is the placement system FAST?

- **a.** The placement system responds quickly (i.e. does not leave you waiting for an extended period of time while it processes information)

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

13. Is the placement system INFORMATIVE?

- **a.** If the placement system is taking time to process information it lets you know this is happening

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

14. Is the placement system FLEXIBLE?

- **a.** The placement system's functions are flexible and can be configured to support diverse and changing needs
- **b.** Flexible use of the placement system can be achieved with little support from the placement system provider

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Not applicable to my role

15. Is the placement system RELIABLE?

- **a.** Placement system 'bugs' and errors are rare
- **b.** Unplanned downtime of the placement system is minimal and causes limited disruption to the needs of people using the placement system

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

16. Is the placement system SUPPORTED? If you did not experience a particular concept, select 'I don't know'

- **a.** Online or documented 'help' information supports you to resolve routine questions independently
- **b.** Online or telephone 'help' is available and timely
- **c.** Online or telephone 'help' provides satisfactory resolution of questions/issues
- **d.** Timely information is provided about planned downtime
- **e.** Unplanned downtime is resolved quickly

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
I don't know

17. Do you have any other comments about the usability of the placement system?

IMPACTS FROM USING A PLACEMENT MANAGEMENT SYSTEM

The following questions explore the IMPACTS of using a placement system compared to when a placement system isn't used.

18. Rate the impact of using a placement system on meeting your INFORMATION needs compared to not using a placement system

- **a.** Access to the RANGE OF INFORMATION needed for my role is...
- **b.** Access to ACCURATE INFORMATION needed for my role is...
- **c.** Access to TIMELY INFORMATION needed for my role is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

Do you have any other comments about the impacts of using a placement system on meeting your INFORMATION needs?

19. Rate the impact of using a placement system on the EFFICIENCY of fulfilling your placement management responsibilities compared to not using a placement system

a. EFFICIENTLY completing my placement management responsibilities is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

Do you have any other comments about the impacts of using a placement system on the EFFICIENCY of completing your placement management responsibilities?

20. Rate the impact of using a placement system on the clarity of your ROLE in managing placement responsibilities compared to not using a placement system.

a. Clarity regarding MY ROLE in managing placement responsibilities is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system

Do you have any other comments about the impacts of using a placement system on the clarity of YOUR ROLE in managing placement responsibilities?

21. Rate the impact of using a placement system on IDENTIFYING placement capacity compared to not using a placement system. [Capacity refers to shifts or placements that the hospital is willing and able to make available for clinical education]

a. IDENTIFICATION of IMMEDAITE and SHORT TERM placement capacity (daily, weekly, unplanned staff leave, changes in student shifts) is…

b. IDENTIFICATION of MEDIUM TERM placement capacity (upcoming placements, responding to changes from education providers) is…

c. IDENTIFICATION of LONG TERM placement capacity (peaks and troughs of patient activity and staff availability, responding to changes from education providers) is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system
I don't know
Not applicable to my role

Do you have any other comments about the impacts of using a placement system on IDENTIFYING placement capacity?

22. Rate the impact of using a placement system on ALLOCATION of placement capacity compared to not using a placement system. [Allocation refers to shifts or placements that the hospital offers to students/education provides for clinical education]

- **a.** ALLOCATION of IMMEDAITE and SHORT TERM placement capacity (daily, weekly, unplanned staff leave, changes in student shifts) is…
- **b.** ALLOCATION of MEDIUM TERM placement capacity (upcoming placements, responding to changes from education providers) is…
- **c.** ALLOCATION of LONG TERM placement capacity (peaks and troughs of patient activity and staff availability, responding to changes from education providers) is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system
I don't know
Not applicable to my role

Do you have any other comments about the impacts of using a placement system on ALLOCATION of placement capacity?

23. Rate the impact of using a placement system on your ability to fulfil REPORTING NEEDS compared to not using a placement system.

- **a.** Meeting MANDATORY REPORTING needs is…
- **b.** Meeting OPERATIONAL INFORMATION and REPORTING needs is…
- **c.** Generating CUSTOM REPORTS is…

Significantly better than with no system
Slightly better than with no system
Neither better nor worse than with no system
Slightly worse than with no system
Significantly worse than with no system
Not applicable to my role

Do you have any other comments about the impacts of using a placement system on meeting your REPORTING NEEDS?

24. The pros and cons of using a placement system may vary across different clinical placement models (e.g. block placements, placements of variable shifts etc.). Having used this placement system, what observations would you make about using the placement system across different placement models?

25. What is your overall assessment of using this placement system?

Very beneficial
Slightly beneficial
Neutral
Slightly onerous
Very onerous

26. Is there anything else you would like to tell us about using the placement system in this pilot?

THANK YOU!

Thank you for generously sharing your time and experiences to contribute to this project.

Your participation will make an important contribution to understanding approaches to clinical placement management.

The findings from this survey will be integrated with data from a range of other sources. This information will inform a report for the Queensland Clinical Education Training Council. The report will be available towards the end of 2014.

If you have any questions or issues you would like to discuss about this project, please contact:

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APPENDIX J – Post-pilot interview schedule

Clinical Placement Management System Pilot

Post-pilot interview

The Clinical Placement Management System Pilot aims to explore the question:

1. *Does use of a clinical placement management system by a health service improve the efficiency of clinical placement management when compared to not using a clinical placement management system?*
2. *What factors should be considered when assessing the potential contribution of a clinical placement management system to optimal clinical placement management for a health service?*

The evaluation of the Clinical Placement Management System Pilot will address each of the following four themes:

1. Key ***features*** of the clinical placement management systems
2. ***User experience*** using a clinical placement management system
3. ***Impacts*** arising from managing clinical placements using a clinical placement management system (within the life of the pilot)
4. ***Outcomes*** for clinical placement capacity using a clinical placement management system (perceptions of potential longer term impacts that *may* be possible)

A number of evaluation processes are being used to contribute to the evaluation process. These processes include, but are not limited to: collection of baseline data about the usual systems used by the health services involved; post-pilot surveys about experiences using the systems; analysis of a Log of Issues and Insights collected at each site during the pilot; and interviews/focus groups with professionals who used the system at each pilot site.

With the consent of each interview participant, the interviews/focus groups will be audio recorded to assist with accurate reporting. The recording will be deleted as soon as the pilot report has been finalised. No information that could identify you will be included in the report.

The interview/focus group will explore the questions detailed below.

Interview/focus group questions

1. Describe what was involved in 'getting going' using SPOT/InPlace Network/Sonia Central for the pilot?

   How did this differ from how you might use the system beyond a pilot context? For example, were there functions the Wesley Hospital staff/ Townsville Hospital and Health Service staff/ Pindara Private Hospital staff performed in this process that might ideally be performed by education providers once you moved beyond a pilot context?

2. What are the most important **enablers and barriers** to a clinical placement management system offering optimal value to your organisation?

3. How would you describe the **user experience** of the clinical placement management system?

4. Has the system provided you with:

   a. more comprehensive and ready access to the **range of information** relevant to your needs?

   b. access to more **accurate information** regarding clinical placements?

   c. more **timely information** regarding clinical placements?

   d. greater levels of **efficiency** for clinical placement management?

   e. the means to **identify** placement capacity more effectively – including in the immediate, short term, medium term, and long term?

   f. the means to **allocate** placement capacity more effectively – including in the immediate, short term, medium term, and long term?

   g. more efficient and effective means to **report** on clinical placement planning and activity?

5. Are the benefits or challenges of using the system equivalent for **different clinical placement models**?

6. Has use of the system contributed to achieving equivalent or greater clinical placement **activity** (relative to a similar period in terms of student placement types etc.)?

7. Do you think that using a clinical placement system over the **long term** would result in:

   a. an increase in use of currently identified clinical placement capacity?

   b. an increase in identified clinical placement capacity, and use of any identified additional capacity?

8. What question haven't we asked that we should have?

APPENDIX K – Placement system key features questionnaire

Clinical Placement Management System Pilot

Key features of the clinical placement management systems

The evaluation of the Clinical Placement Management System Pilot will address each of the following four themes:

1. Key ***features*** of the clinical placement management systems
2. ***User experience*** using a clinical placement management system
3. ***Impacts*** arising from managing clinical placements using a clinical placement management system (within the life of the pilot)
4. ***Outcomes*** for clinical placement capacity using a clinical placement management system (perceptions of potential longer term impacts that *may* be possible)

The following questions are designed to capture details regarding the first of these evaluation elements – *'the key **features** of the clinical placement management systems'*. The same questions are being asked of each provider that has a clinical placement management system included in the pilot.

Please return your responses by **Friday 10 October 2014** to gretchen@youngfutures.com.au

1. Describe the key design principles/philosophies/perspectives that informed the design of the system

2. Describe the system's capacity mapping and planning functions

3. Describe the system's functions for education providers to make placement requests

4. Describe the system's functions for placement allocation and the extent to which business rules and/or manual functions can be used

5. List the functions of the system that are customisable, e.g. business rules; removal and addition of fields within different functions; terminology; language, time and units of measure; permissions for visibility of specific information to different users; editing of custom fields

6. Describe the system's functions for assigning actions – manually; using default settings; using bulk actions

7. Describe the system's capacity to interface with other systems for data import and export; access via mobile technology; other

8. Describe the system's functions for scheduling interviews or other interactions between students and health services; health services and education providers etc.

9. Describe the system's communication functions – SMS; email; social media; bulk; individual etc.

10. Describe the student data collected by the system – biographical; nomination of placement preferences; placement prerequisites required and fulfilled; placement history; attendance; learning objectives; competency; feedback; other

11. Describe the system's reporting capacity – standard reports; customised reports; historical reporting; real time reporting; future state reporting

12. Describe the system's feedback functions – between supervisors and students; between students and education providers; between education providers and supervisors; other

13. Describe the contributions required and/or possible by relevant stakeholders for the operation of the system – health service (including specific roles as appropriate); education provider; student

14. Describe the system's repository functions (including permissions for viewing) – such as agreements; deeds; schedules; programme information; placement pre-requisites; health service specific information

15. Describe the system's functions for electronic forms for functions such as surveys; polls; learning agreements; evaluations; feedback; including the import and export of data

16. Describe the way the system supports/enables communication between health services, education providers and students in relation to student allocation; placement allocation; supervisor allocation; placement progression; other

17. Describe the capacity to delegate specific functions to particular individuals/roles (e.g. delegation of student attendance record keeping to students)

18. Describe the system's invoicing functions

19. Describe any other relevant functions of the system

20. Attach 3 or 4 particularly pertinent screen shots from your system to illustrate some of its key features