

Evaluation of three Better Skills Best Care pilot projects

*Department of Health
Victoria*

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Executive summary

Background and objectives of the evaluation

The Victorian workforce reform approach is designed to address health workforce supply and distribution by identifying, supporting and trialling ways to improve the utilisation of the workforce through workforce redesign and reform. From 2005-2011, Victoria's Better Skills Best Care (BSBC) strategy explored and trialled innovations that sought to improve workforce capacity and utilisation and the sustainability of service delivery while maintaining and improving quality of outcomes, efficiency and worker satisfaction. BSBC's key objective was to ensure that *the right people with the right skills are in the right place at the right time to deliver quality care to patients*. Two areas of particular interest to the department over the course of BSBC have been models that utilise extended skills in nursing and allied health as well as building an assistant workforce.

A key program of work under BSBC has been the Workforce Innovation Grant Program (WIGP). In 2008-09, the WIGP funded 22 innovative pilot and research projects in locations across Victoria. The projects were selected to test innovation at the local level but also had state wide applicability.

In 2011, the Department of Health (the department) engaged PwC to conduct an evaluation of three pilot projects under the Workforce Innovation Grant Program (2008-09):

- Bendigo Health – Health Service Assistant Pilot Project: the introduction of eight Health Service Assistants (HSA) in the ED, Medical Ward, Rehabilitation Unit and CCU.
- Austin Health – Health Assistant (Nursing) Pilot Project: the introduction of six Health Assistants (Nursing) (HA(N)) across three wards.
- Lorne Community Hospital (LCH) Remote X-ray Program: the up skilling of four nurses to perform x-rays at Lorne Community Hospital, with clinical governance linkages to Barwon Medical Imaging (BMI) at Barwon Health.

The overarching goal of this evaluation is to assess the appropriateness and feasibility of the workforce reforms that have been piloted in the three projects.

The objectives of this evaluation are twofold, to assess:

- the appropriateness through the efficiency, effectiveness and sustainability of the pilot programs.
- the feasibility of the pilot programs, the lessons learned and recommendations for the future.

Appropriateness was analysed against an assessment of efficiency, effectiveness and sustainability. Feasibility was analysed against an assessment of replicability, scalability and risk. Considering the pilot projects as a group of health workforce reform projects, the following themes and lessons learned were drawn from the evaluation.

Project methodology

The review was structured into seven key stages:

- **Stage 1:** Inception meeting with the Department, which included discussion and agreement of the evaluation scope, timeframes, method and stakeholders to be consulted.
- **Stage 2:** Initial information scan in which key documents were gathered and reviewed, including the Impact Assessment Framework (IAF).
- **Stage 3:** Initial evaluation which involved assessing available data against the draft IAF framework.

Executive summary

- **Stage 4:** Stakeholder consultations undertaken and the progress report delivered.
- **Stage 5:** Evaluation of the pilot projects in more detail drawing upon the qualitative information gathered during the consultations.
- **Stage 6:** Financial impact assessment of the three pilots. The data analysis undertaken in stages 5 and 6 above has brought together the findings from the data collection and consultations.
- **Stage 7:** Delivery of Final Evaluation Report to the Department.

Further detail regarding the approach for the review and key activities in each stage is provided in Section 2 of the report.

Overarching themes

There were consistent themes identified in the evaluation of all three pilot programs. These included:

- *Minimal impacts on other health professionals*

The HA(N)s at Austin Health and the HSAs at Bendigo Health supported health professionals on the wards in addition to the current required nurse-patient ratios in Victoria. The implementation of the Austin HA(N) role did however reduce the number of agency and overtime hours worked which was deemed a cost saving as a result of the pilot program. The HSA role provided additional support for nursing staff in the context of high nursing vacancies.

At the LCH, there were no additions to staff numbers. Given the selection of nurses participating in the project (being senior nursing staff) and the minimal number of images taken over the course of the pilot, there were limited disruptions and impact on other nursing staff.

- *Well received by other staff within hospital settings*

Feedback from staff participating in the consultation process was positive. Health professionals impacted at each of the hospitals have been supportive of the program.

At Austin Health, there was improved satisfaction in terms of completing work, enabling registered nurses to focus on more clinically orientated tasks and improving the overall quality of patient care. Staff consistently stated that they feel happier and more satisfied with their work when HA(N)s are present on a shift compared to shifts that do not have HA(N)s.

At Bendigo Health, the HSAs had a positive effect on improved staff satisfaction significantly over time. While survey respondents were initially mixed as to the effect on nurse retention, responses were positive in the final survey (100% of responses provided at the end of 12 months scored '4' or greater on the Likert Scale).

At Lorne, nurses who participated in the pilot program expressed satisfaction in their role, and enjoyed the opportunity to learn and conduct X-rays. Management was pleased with overall implementation of the role while the impact of nurses conducting X-rays had little implication to the workload of other nurses.

- *Well received by patients and the wider community*

Feedback indicates that all pilot programs provided improved patient care through increasing the responsiveness to patient needs. Feedback through surveys received from patients, families and carers participating in the pilot were positive.

At Austin Health, patients indicated to nursing staff that they benefited from the one-on-one contact provided by the HA(N)s, particularly patients who have a longer stay on the ward. Staff reported that they no longer received as many complaints from patients about daily activities such as '*their food not being hot*'. Also, an analysis of patient complaints revealed that across the three wards at Austin Health where HA(N)s were in place, patient complaints decreased by almost 50% from 40 to 21 over the course of the pilot. Similar comments were made by the nursing staff at Bendigo Health in relation to patient satisfaction and the positive impact the HSAs had on patient care, particularly in the execution of activities of daily living.

At Lorne, the themes emerging from patient consultations to support the program were supported by a survey of 40 clients. The key benefits that patients perceived included being able to be treated locally and remaining on holiday or close to home and saving the trip back to Melbourne or Geelong hospital facility. More than 85% of patients requiring X-ray services at Lorne were not required to make a further trip to Barwon Health.

Other advantages and risks

Other key advantages and risks highlighted across the three pilot projects include:

- There was executive support across the three pilot projects that assisted in effective implementation
- The models evaluated were sustainable with an aim to provide quality patient care and build a workforce capable of meeting community needs
- There were concerns across the pilot projects on role definition and structure for supervision. These concerns have been addressed in differing ways across the three pilot projects, and
- Across the pilot projects it was found that the models would be replicable and scalable to other geographic areas where similar demographic and regional characteristics were present.

Findings specific to each of the pilot programs are presented in further detail below. These findings are structured based on the key measures of the IAF framework in terms of efficiency, effectiveness, sustainability and feasibility.

Project-specific key findings

Bendigo Health: Health Service Assistant

The key findings presented in the table below includes the views of the stakeholders interviewed for the Bendigo Health pilot program and is reflective of the data and information provided by Bendigo Health.

Key findings

Efficiency

The pilot has provided additional workforce above the current nurse-patient ratios required in Victoria. The net cost of the program is \$34,330 per annum. There are assumed to be minimal ongoing efficiencies to the net cost of the program as new HSAs are recruited annually. These costs are after receiving government subsidies of \$58,500 and benefits from a reduction in drop-out rates for undergraduate university courses as a result of this program.

Effectiveness

There was executive support and leadership for the HSA pilot project. The communication strategy enabled engagement of key stakeholders; but due to extended consultation with the Australian Nursing Federation (ANF) the timing of some project tasks were delayed, potentially impacting the successful and timely engagement of other stakeholders. There has been improved staff satisfaction and retention since the implementation of the HSA role and continued support for the new workforce model. A mixture of survey and anecdotal commentary demonstrated a positive impact on the overall patient experience. Based on the analysis of the data the workforce model was of benefit to Bendigo Health and is therefore effective in its purpose.

Key findings

Sustainability

The long term objective of the Bendigo HSA program is to provide additional support for nursing staff to provide quality patient care and to build a sustainable nursing workforce into the future. Workforce satisfaction in the longer term may translate into greater retention of nursing staff. Although the HSA workforce is a transient group of a maximum of 12 months per intake group, the continuity of a stable HSA model provides a consistent additional workforce. The structure of the HSA program into a 'gap year' for pre-tertiary health students provides community support by enabling students from a rural background to qualify for Commonwealth Student Assistance and a qualification enabling them to work in health and support themselves while studying. The key risks of the program are related to role definition and the sustainability of the continuing recruitment and training of HSAs. It is apparent from the information presented that the workforce model is an advantage and sustainable in the Bendigo Health region.

Feasibility: replicability, scalability, risks

The HSA pilot model may be applied to most hospital wards across all clinical areas where appropriate supervision and training are provided. The HSA role impact on the workforce and patients was seen to be positive, however the need for flexibility in these roles was noted. Feasibility is dependent upon the ongoing commitment to the investment of recruitment and training and acceptance of the model by external stakeholders.

Appropriateness: The information informing the measures of efficiency, effectiveness and sustainability demonstrate that this workforce model is an appropriate model for consideration in future workforce reform particularly in areas facing similar staffing challenges to that of Bendigo Health.

Feasibility: Based on information collected in relation to replicability, scalability and risks this model is therefore feasible for roll out to other hospitals across the State that have similar workforce issues to Bendigo Health.

Austin Health

The key findings presented in the table below includes the views of the stakeholders interviewed for the Austin pilot workforce model and is reflective of the data and information provided by Austin Health.

Key findings

Efficiency

The pilot has provided additional workforce to support current nursing staff. Costs associated with agency staff and specialising nurses decreased throughout the pilot. The net cost of the HA(N) program (including training) over the course of the first year equates to \$56,800. However for each year thereafter the benefit of the HA(N) role is \$6,000 given the initial implementation costs will be reduced.

Based on the four full time HA(N) positions and the associated inputs and outputs it can be concluded that the workforce model was efficient.

Effectiveness

There was strong executive support and leadership for the HA(N) pilot project. The Austin had in place a number of processes and systems and a project officer to support the implementation of the HA(N)s. The new workforce model has improved staff satisfaction and received positive patient feedback.

From the analysis of the data collected it may be determined that the workforce model was of moderate to significant benefit and therefore effective in its application.

Key findings

Sustainability

The long term objective of the Austin HA(N) program is to provide support for nursing staff and to provide quality patient care. Over time, there may be further improving efficiencies as HA(N)'s become more adept at their tasks and require less supervision.

The HA(N)s reduce the workload and stress levels on existing Registered Nurses (RNs) and Enrolled Nurses (ENs) and this may lead to improved retention and the Austin becoming an 'employer of choice'.

Feasibility: replicability, scalability, risks

The impact of the HA(N) role on the wider workforce was seen to be positive and a further roll out of 24 new HA(N) positions at the Austin demonstrates the success and support for the program.

Initial concern expressed by the ANF of the HA(N) role related to the perceived addition of unregistered workers to the nursing workforce in Victoria, the role definition and the structures for supervision. The Austin provided commentary in relation to an undergraduate nursing model (the model favoured by the ANF) and the reasons for the pilot of the HA(N) model including difficulties associated with rostering and team-building in an undergraduate nursing model. The RMIT were very supportive of the HA(N) model and indicated that they would be happy to work with other hospitals to develop a training model that meets their individual needs.

Appropriateness: Taken together the information collected to inform the measures of efficiency, effectiveness and sustainability demonstrate that this workforce model is an appropriate model for consideration in future workforce reform.

Feasibility: Our conclusion is that from the information presented in relation to replicability, scalability and risks the Health Assistant in Nursing workforce model has been developed with a strong foundation and is feasible for broader roll out to other suitable hospitals and wards across the State.

Lorne Community Hospital

The key findings presented in the table below include the views of the stakeholders interviewed for the Lorne Community Hospital (LCH) pilot program and are reflective of the data and information provided by the LCH.

Key findings

Efficiency

In the first year of implementation, there is a net cost of \$17,600, and after the first year, there is a net benefit of \$34,450 per annum from the program given the initial implementation costs will be reduced.

Effectiveness

The quality of images taken by nurses has improved over the life of the pilot. Nurses have been shown to have an appropriate repeat rate in comparison to radiographers and when benchmarked against standard indices. All images taken by nurses have been shown to be of diagnostic quality supporting effective triage and appropriate patient management decision making. There has been a significant economic benefit from the pilot in reducing opportunity costs and travel time for carers to other major imaging or hospital centres. In particular travel time to Geelong Hospital for imaging services has been reduced for over 85% of presenting X-ray patients at the LCH. Anecdotal feedback received from both patients and the wider local community was positive. Continued community support is evident through the provision of additional funding to the program.

The measure of effectiveness was based primarily on the qualitative data collected. From the analysis of the data it may be determined that the workforce model was of significant benefit to the Lorne community

Key findings

and hospital and therefore effective in its purpose

Sustainability

Success and sustainability of the program relies on continued auspice and support from BMI, a sustainable funding model and acceptance by external stakeholders, in particular from the Health Service Union (HSU), the ANF and their respective members.

Anecdotal feedback demonstrated that demand for the pilot service is expected to continue into the future particularly given the expected increase in tourist and resident population numbers in Lorne.

Feasibility: replicability, scalability, risks

Additional staff holding licences may reduce workload of existing nursing staff participating in the program. This would allow the LCH to 'share the load' of completing images.

Risks on replicability and scalability of the program surround stakeholder support, and a positive auspice relationship. The formalisation of the clinical governance framework evolved over time and a management governance framework was established.

Appropriateness: Taken together the measures of efficiency, effectiveness and sustainability demonstrate that this Nurse X-ray workforce model is an appropriate model for consideration in future workforce reform.

Feasibility: Our interpretation of the information presented in relation to replicability, scalability and risks demonstrates that the workforce model has been developed with a strong foundation and is feasible for broader roll out to other hospitals with similar demand and facing similar geographic distances as Lorne to other radiographic facilities.

Lessons learned

While undertaking the analysis of the above qualitative and quantitative data analysis, several lessons were identified. The lessons learned for the three pilot programs have been summarised and grouped under the following primary themes:

- Stakeholder engagement and support
- Effective pilot program development
- Effective up-front pilot development is important to the success of the program
- Clinical governance and project management
- Importance of clarifying and defining roles
- Leadership and pilot champions

These should be considered when implementing new workforce models. The lessons gleaned from the three workforce models have been discussed in further detail in the final section of this report.

Recommendations

The key findings provide evidence in support of each of the new workforce models tested and provide recommendations for the wider implementation of each of the new workforce models. Recommendations have been made specific to the individual pilot programs given the unique nature of each new workforce model but also within the context of future program implementation.

The Bendigo Health and Austin Health nursing assistant programs are efficient and effective in achieving their objectives and providing solutions to increase workforce support.¹ These workforce models are feasible for wider roll-out in health services facing similar workforce challenges to the two models piloted. We recommend that the program continue at Bendigo Health and at Austin Health and be rolled-out in other areas of need, with consideration given to the following recommendations:

- **Defining the nursing assistant role:** Roles and responsibilities for nursing assistants should be clarified and documented, and communicated to all nursing staff and external stakeholders. Annual review of the roles and responsibilities should occur to reflect any changes in practice. The education of new staff members is important to ensure that they are aware of the role of the nursing assistant. Roles and responsibilities can be refined based on the different requirements in each clinical area; however, an overarching role description should be in place.
- **Supervision of nursing assistants:** A position description for nursing assistants including supervision structures should be confirmed and monitored to identify any variations in practice or supervision.
- **External stakeholder engagement:** Key stakeholders should be consulted throughout the development and implementation of the model. Following the completion of this evaluation there is an opportunity for health services and the ANF to meet and further discuss nursing assistant pilot models.
- **Support mechanisms:** Structured support mechanisms should be in place to provide nursing assistants with formal debriefing sessions both in the educational and clinical environments. Further, ongoing training should be provided to support continuing professional development and nursing assistant competency.

For Bendigo Health specifically, there is a need to continue to review the ongoing feasibility of the annual recruitment and training program and the appetite for a permanent position in light of available training grants and the changes in the Australian Government Austudy funding prerequisites.

As the Lorne Nurse X-ray program appears efficient in providing cost savings, and effective in providing safe care, we recommend that the program continue at Lorne. This workforce model is feasible for wider roll-out in communities similar to Lorne in terms of geographic location and service provision, access to the radiography workforce, and adherence to licensing criteria. Given these criteria are met, consideration should be given to the following recommendations for improvement in wider implementation of the model:

- **Business case:** A business case should be established identifying the program rationale, objectives and parameters, and clinical governance and quality monitoring frameworks.
- **Stakeholder engagement:** Key stakeholders to be consulted throughout the establishment and implementation of the model.
- **Auspice:** Locations considering implementation of the model should have a demonstrated relationship with an auspice body (such as the radiography department at a larger hospital), or identification of a proposed auspice and an outlined plan to develop a relationship that includes oversight governance services.
- **Governance frameworks:** Governance frameworks should be established prior to the commencement of the model and be trialled and formalised throughout the introduction of the model.
- **Training and development:** Ongoing training should be provided to support professional development. Opportunities should be explored with Victorian educational facilities to have appropriate courses for nurses conducting limited licence X-ray in rural and remote locations.

¹ At Bendigo Health nursing assistants were called Health Service Assistants (HSAs), while at Austin Health they were called Health Assistants (Nursing). However, the assistant role that was piloted is similar in both models.

- **Defining of roles:** Roles and responsibilities for nurses holding a limited licence should be defined and established based on the limited licence criteria which form the basis for which X-rays are taken. This would be supported by guidelines, resources and conditions for when a nurse may hold such a licence.
- **Infrastructure:** Where possible, compatible radiography machines and systems between the auspice and pilot service should be installed.

These recommendations provide a basis upon which health services and the department may consider the future roll-out of the Austin and Lorne programs and the model in place at Bendigo Health in other regional areas facing similar challenges.

Concluding comments

Across the three workforce models the evaluation has highlighted a number of advantages including the overall staff support for the models and the patient satisfaction. Readers should refer to the limitations of the data used in this evaluation, as outlined on page 86 of this report.

Each of the three workforce models are appropriate and feasible for future roll-out to other suitable health services. Importantly, the suitability of other health services to implement these workforce models should be considered based on the criteria discussed in this report.

Furthermore a number of lessons and recommendations have been identified. There are clear interdependencies between the lessons learned and the recommendations:

- continuing external stakeholder engagement and communication
- defining roles and responsibilities of staff together with supervision and support structures
- providing ongoing training and development for staff
- identifying project management, clinical governance and evaluation monitoring well in advance of project implementation.

Taken together, the lessons learned and recommendations provide the department, the participating services and services considering implementation of the workforce models with a basis for implementing strategies to improve these models and to consider the future roll-out.

1 Background

1.1 Introduction

The Better Skills and Best Care (BSBC) strategy was established by the Department of Health in 2005 to enhance patient access to healthcare through improving clinical productivity of highly skilled medical, nursing and allied health professionals.

The BSBC strategy has been delivered over a number of stages, which include:

- **Stage 1 (2005/06)** – provided funding for 36 role specific projects during 2005/06 to investigate locally based opportunities for workforce innovation.
- **Stage 2 (2006/07-2008/09)** – examined comprehensive workforce design opportunities from a service-wide approach in anaesthetics, emergency and intensive care.
- **Stage 3 (2009/10 –2010/11)** – examined workforce reform activity across Victoria.
- **Stage 4 (2010/11 – current)** – is supporting a range of innovative pilot, feasibility and research projects selected to test innovation at the local level but having state wide applicability.

In Stage 3, the department explored four strands of workforce reform. They included:

- Developing and implementing new ways of working across health service workforce responsive to the needs of the health services and patients.
- Looking at the potential of further advanced practice professional roles to provide better outcomes for patients, promote greater work satisfaction of staff and contribute to more efficient and sustainable health services.
- Investigating health workforce innovation via a series of pilot projects funded under the Workforce Innovative Grants Program (WIGP), with the focus for the projects to explore workforce redesign, workforce restructure and workforce planning to improve workforce capacity, utilisation and sustainability of service delivery while maintaining and improving patient outcomes and worker satisfaction.
- Patient perspectives of workforce models / reform.

1.2 Scope of review

It is through the investigation of health workforce innovation projects as part of Stage 3 that PwC was engaged by the department to conduct a qualitative and quantitative evaluation of the efficiency, effectiveness and sustainability of three selected WIGP pilot projects implemented under the BSBC strategy. In addition, PwC was required to consider possible improvements in the models used to strengthen their implementation and understand the ongoing and wider feasibility of the selected pilot projects.

The WIGP pilot projects in this evaluation include:

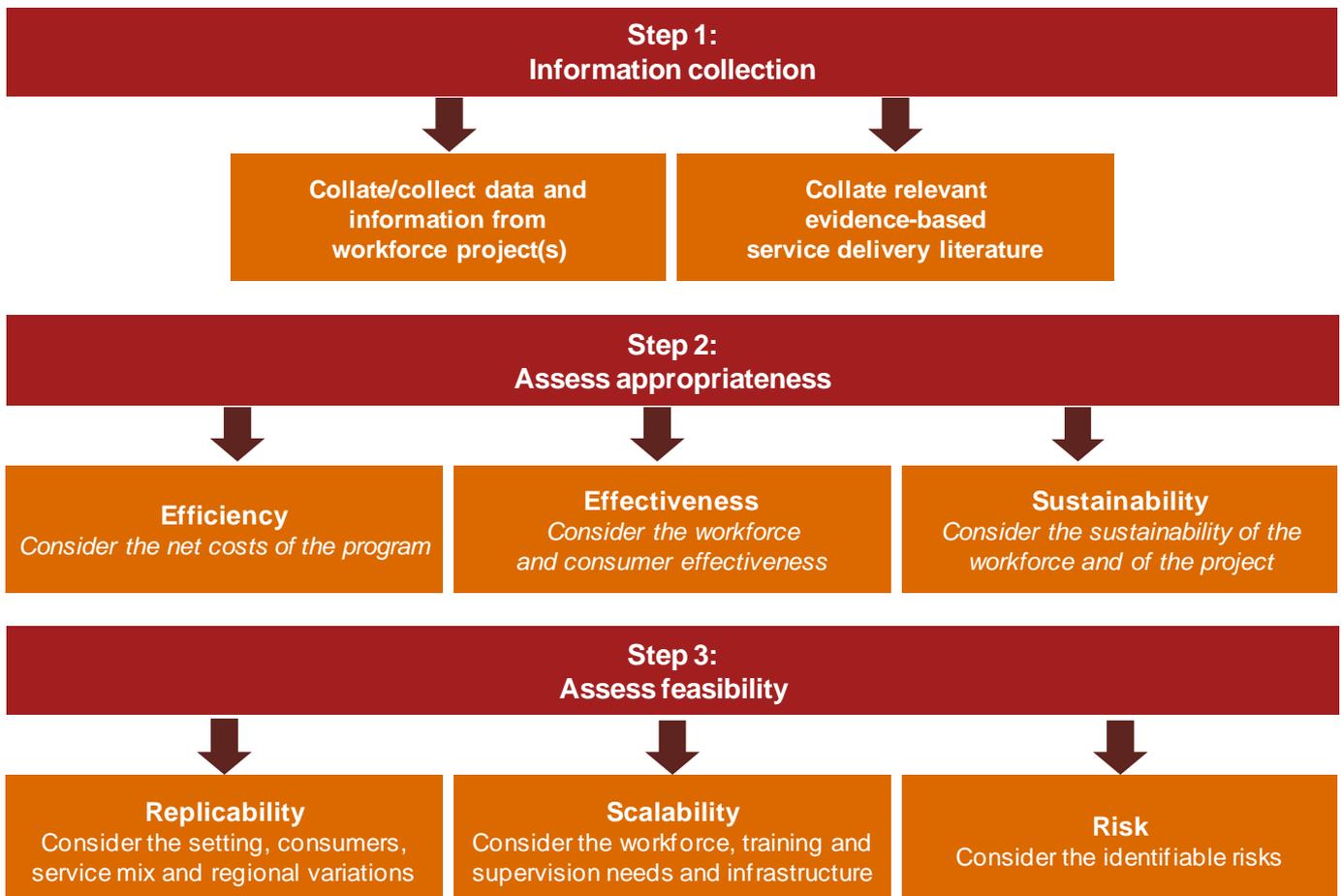
- **Bendigo Health – Health Service Assistant Pilot Project:** which included the introduction of eight Health Service Assistants in the Emergency Department (ED), Medical Ward, Rehabilitation Unit and Critical Care Unit (CCU).
- **Austin Health – Health Assistant (Nursing) Pilot Project:** which included the introduction of six Health Assistants (Nursing) across three wards.
- **Lorne Community Hospital Remote X-ray Program:** which involved the up skilling of three nurses to perform X-rays at Lorne Community Hospital, with clinical governance linkages to Barwon Medical Imaging (BMI) at Barwon Health.

2 *Project method*

PwC conducted these three evaluations by drawing on elements of the draft Impact Assessment Framework (IAF) developed by Health Workforce Australia (HWA) in December 2010, which is designed to measure the appropriateness and feasibility of a workforce reform project (see Figure 1). In addition, PwC considered pilot-specific indicators of success (which could be assessed qualitatively or quantitatively) to ensure all benefits and impacts of the pilot projects are considered. The three steps of the IAF involve:

- Data and information collection.
- Evaluation of appropriateness.
- Evaluation of feasibility.

Figure 1: The draft HWA impact assessment framework



2.1 Step 1: Information collection

Both project data and relevant evidence-based service delivery literature are needed to complete an assessment using the IAF. The objectives of each workforce model were largely determined prior to the implantation of the project. An expectation of the necessary outputs and outcomes of the workforce model can be formed based on these objectives. This planning assists in the next steps where data can be used to link back to these set objectives.

Evaluations were performed by the piloting organisations during and after the completion of the pilot studies. The data collected for this external evaluation included patient and staff surveys and information from consultations with relevant stakeholders. Data from the internal evaluations as well as the evaluation reports and findings were used in the process of externally evaluating these projects using the IAF.

2.2 Step 2: Assess appropriateness

The second step in the IAF, appropriateness, is to evaluate the workforce model being piloted to the extent it meets the identified objectives and the elements of appropriateness - including an assessment of efficiency, effectiveness and sustainability of the project:

- The assessment of **efficiency** involves the quantitative and qualitative evaluation of the relationship between inputs and outputs, in resource terms (ie impact on productivity and/or costs). Efficiency assesses the relationship between inputs and outcomes. It is a useful way to monitor how well a pilot is implemented relative to the outputs to be delivered. Efficiency assists to determine if inputs were used optimally or whether the outputs could have been achieved with fewer inputs or in a shorter timeframe or with better quality. An additional feature of assessing efficiency is to measure 'net efficiency', looking at the given value of inputs for each outputs of the workforce model being piloted.
- **Effectiveness** refers to the extent to which the program is producing worthwhile results and / or the program outcomes achieve program objectives. Evaluations of effectiveness seek to measure the impact of a program, and generally are undertaken after a reasonable amount of time so that outcomes may be realised. Given the 'outcomes' focus of effectiveness evaluations, this type of analysis usually encompasses an assessment of economic impacts. As a result the IAF captures the assessment of both workforce and patient effectiveness in terms of access, service and sustainability.
- The assessment of **sustainability** includes the assessment of the adaptability of the workforce and the workforce model objectives ability to continue to impact the workforce in the long-term. The IAF captures the assessment of both workforce and patient sustainability, access and service. This is a key consideration in considering wider implementation of the model, that is, is it potentially a positive model for the health system overall as well as the individual service

The framework draws on available existing data. Table 1, Table 2 and Table 3 below show the IAF framework capturing efficiency, effectiveness and sustainability including the overarching measures for assessment that are identified in the draft IAF documentation.

Table 1: IAF framework for efficiency

Measures of efficiency	IAF indicators
Inputs	Salaries and training
	Training costs (initial and ongoing)
	Capital costs
	Supervision costs
	Administration costs
	Other Staff costs
Outputs	Change in staff numbers
	Changes in occasions of service
	Work Structure

Table 2: IAF framework for effectiveness

Measures of effectiveness	IAF indicators
Inputs	New workforce model set-up and implementation
Objectives	Short-term objectives
	Medium-term objectives
Outcomes	Workforce indicators
	Enhanced staff competencies
	Improvements in staff capacity and responsiveness
	Increased staff satisfaction
	A more appropriate workforce profile for the location
	Opportunity costs patients / carers
	Patient indicators
	Improved customer outcomes
	Patient satisfaction

Table 3: IAF framework for sustainability

Measures of sustainability	IAF indicators
Objectives	Long-term objectives
Outcomes	Workforce indicators
	Feasible workforce requirements in the long-term
	Adaptability of the workforce to change in processes/skills
	Workforce retention/recruitment
	Risks (environmental, political, occupational)
	Health workforce profile
	Patient indicators
	Continuity of care
	Acceptability of future model delivery
	Future need for service

2.3 Step 2: Assess feasibility

The third step in the IAF framework is to assess feasibility. An estimation of the feasibility of a workforce model pilot measures the ability for the workforce model to be rolled-out on a larger scale. This includes the identification of the type of service settings the workforce model may be rolled out and the impact it will have on the future health workforce and sustainable service delivery.

Indicators for each category within feasibility is provided below in Table 4 as a guide, however, indicators are model-dependent and should be determined in the context of each workforce model in consultation with the pilot projects stakeholders. Overall, the assessment aims to consider the aspects of replicability, scalability and the extent of ongoing risk to determine the level of feasibility for a given project.

Table 4: IAF framework for feasibility

Measures of feasibility	IAF indicators
Replicability	Settings
	Patients
	Range and volume of service
Scalability	Workforce
	Training and supervision
	Infrastructure (buildings and equipment)
Risks	Identifiable risks of the reform project

2.4 Project approach

The review comprised seven key stages:

- **Stage 1:** Inception meeting with the Department, which included discussion and agreement of the evaluation scope, timeframes, method and stakeholders to be consulted.
- **Stage 2:** Initial information scan in which key documents were gathered and reviewed, including the IAF.
- **Stage 3:** Initial evaluation which involved assessing available data against the draft IAF framework.

The aim of this stage of work was to undertake an initial evaluation of the pilot programs against the IAF. A draft evaluation framework, based on the IAF and inclusive of other indicators was developed.

- **Stage 4:** Stakeholder consultations undertaken and the progress report delivered.

In order to gain further insight into the three pilot programs, interviews with the pilot sites and external stakeholders were conducted. The primary objective of the stakeholder interviews was to collect qualitative information informing the evaluation. A consultation document was developed relevant to internal (pilot sites) and external stakeholders to guide discussion.

The method of consultation used was individual and group interviews conducted face-to-face or via teleconference. The purpose was to seek stakeholders' views in relation to program processes, lessons learned and alignment of activities with program objectives. The information gleaned from these interviews has contributed to the key findings presented in this report.

The stakeholders interviewed are identified in Appendix B and include:

- pilot site stakeholders: program managers and leaders, staff involved in the pilot program, staff impacted by the pilot program
- external stakeholders: Australian Nursing Federation (ANF), Health Services Union (HSU), educational institutional and other relevant parties.

A data request was made to each of the pilot sites following the consultations.

- **Stage 5:** Evaluation of the pilot projects in more detail drawing upon the qualitative information gathered during the consultations.
- **Stage 6:** Financial impact assessment of the three pilots. The data analysis undertaken in stage 5 and 6 has brought together the findings from the data collection and consultations.
- **Stage 7:** Delivery of Final Evaluation Report to the Department.

The data analysis has provided the basis for the key findings, lessons learned and recommendations. The delivery of this evaluation articulates the findings of the evaluation review.

2.5 Pilot project evaluations

The following three sections present the key observations of the review for each of the three pilot programs evaluated.

- The measures of appropriateness and feasibility (as outlined above) have been used to summarise the key observations of the individual programs.
- The qualitative data presented in this section includes the views of the stakeholders interviewed for each pilot program along with the documentation provided by the organisations. The data largely represent stakeholders' perception of what the program has achieved.
- The quantitative data presented is based on data provided by the three organisations. The data have been analysed to determine the efficiency, effectiveness and sustainability of the pilot programs. A number of assumptions have been made using the data received and through consultations with the three organisations.

Key assumptions, findings and recommendations have been described in each of the relevant sections.

3 *Bendigo Health – Health Service Assistant*

3.1 Overview

In 2008 Bendigo Health developed its *Nursing Services Workforce Plan 2008-2013*. The Workforce Plan identified the key challenges facing the sustainability of the nursing workforce across the State, with a particular focus on Bendigo Health. Importantly, the plan identified an increased number of nursing staff vacancies with a total vacancy number of just under 62 EFT at August 2008, and likely to increase with the ageing workforce. This nursing shortage had a direct impact on clinical service delivery at Bendigo Health, with beds closing in wards that were unable to be sufficiently staffed. In response to these findings, Bendigo Health recommended the introduction of a traineeship for a Health Services Assistant (HSA) role to support nursing staff on selected wards.

As a result, in early 2009 Bendigo Health piloted eight HSA roles across four pilot wards including the Emergency Department (ED), Medical Ward, Rehabilitation Unit and the Critical Care Unit (CCU). The HSAs were Year 12 school leavers that had nominated a health related university based course (predominantly nursing) for study in 2010. Based on preliminary research into the behavioural drivers for Generation Y, the program was constructed to attract school leavers to have a ‘gap year’ before commencing their tertiary study. This would provide immediate support to the nursing workforce and take advantage of funding available through the Commonwealth and Victorian Governments’ training subsidies. A key plank in the program was the intention that HSAs would work sufficient hours during the twelve months to meet the independence eligibility criteria for the Commonwealth Youth Allowance. Eligibility for the Commonwealth Youth Allowance is a significant economic benefit for rural students who frequently have to move from rural areas to major cities to undertake their tertiary courses. In addition, a transferable HSA qualification could enable students to continue to contribute to the health workforce whilst supporting themselves in their tertiary qualification.

Utilising a recurrent 12 month cycle of recruitment and training enabled ongoing access to government training grants and the opportunity for more young people to engage in the health sector.

The eight trainees recruited completed a Certificate III in Health Services Assistance whilst working with the nursing team on the selected wards that experienced high acuity and high staff turnover.

The HSAs role focused on activities of daily living and other related duties such as personal hygiene, basic mobility, manual handling, simple feeds, bed making, documentation and restocking of ward supplies.

The HSA role operated in addition to current nurse-patient ratios required in Victorian public hospitals and met all requirements of the existing industrial instruments.

It should be recognised that, as with any innovative workforce model, Bendigo Health in leading the way encountered situations that required careful and active management. Although included in this evaluation the costs incurred during these processes may not be replicated in future implementations of the model.

This pilot program was a workforce initiative that had not been done in Victoria before. It was conducted at the same time as another pilot program using nursing assistants being undertaken at Austin Health. As such it was a groundbreaking initiative.

3.2 Step 1: Information collection

Evaluation was performed by the department after the completion of the Bendigo Health pilot study. The data collected for this evaluation included patient and staff surveys and information from consultations with relevant stakeholders.

Data from the evaluation as well as the evaluation reports and findings were used in the process of evaluating this workforce model using the IAF.

There are a number of key information sources that were reviewed as a component of the evaluation prior to the consultation phase, these included:

- Pilot progress reports (if applicable)
- Training guidelines
- Position descriptions
- Competency audits.

Following the consultation a data request was submitted to Bendigo Health for additional and more detailed data against the individual IAF indicators, these included:

- Cost of training HSAs, a) Setting up the training program, b) cost of course leaders, rent for rooms, other costs incurred in the training program
- Costs of any new equipment or 'set up' once-off costs incurred in setting up program
- Cost of the time which existing Division 1 and Division 2 nurses will spend in supervising and teaching HSAs on the job (This may be offset by cost efficiencies of the HSA in their role)
- Costs of hiring HSAs (payroll setup, uniforms, supplies, ongoing recruitment costs)
- Salary cost of HSAs (\$ per hour x hours per week)
- Commencement Incentive
- Completion Incentive
- The actual tasks which HSAs would take away from Division 1 and Division 2 nurses, as well as the additional tasks which HSAs now do which were previously undone
- Does the addition of HSAs impact upon other workforces, that is, does this mean the Division 1 and Division 2 nurses have more capacity to be of assistance to doctors, and allied health professionals? And is this measurable to any extent?
- Time between patients buzzer and being attended to
- Occasions of service a) service by HSAs in attending to patient needs, b) additional patient occasions of care which Div1 and Div2 nurses can now provide
- Reduction in : a) sick leave, b) staff turnover, c) absenteeism, d) workers compensation claims
- Reduction in adverse events, falls, incidents, and patient or family complaints.



3.3 Step 2: Assess appropriateness

3.3.1 Efficiency

The measure of efficiency is looking at the net results after inputs and outputs into the pilot program. It is important to note that the model piloted included duties that were in addition to current service levels and in addition to nurse patient ratios.

Table 5 outlines the key project-specific efficiency measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 5: Bendigo Health HSA efficiency measures 2009

Measures of efficiency	IAF indicators	Bendigo indicator	Results
Inputs	Salaries and recruitment	Wages for 7 HSA trainees for 12 months + 1 for 10 months	\$227,300
	Recruitment costs	Local school visits & interviews by Manager Professional Standards & Education= 10 hours @ \$39 + 10 hours @ \$49	\$900
	Other staff costs	Costs of uniforms (for 8 staff)	\$2,200
	Training costs (initial and ongoing)	Initial - Week 1 of Bendigo Regional Institute of TAFE (BRIT) course Course Fees, Orientation, Management costs	\$9,000
	Project management	Project Manager (5 hours/week @ \$39)+ administration costs	=\$10,100 +\$6,800 =\$16,900
	Supervision costs	On the job training by supervising RN (1.3 RN EFT)	\$40,500
	Total inputs		\$296,800
	Eligible Government apprenticeship subsidies	VECCHI (Federal Australian Apprenticeships' Scheme) Department of Health Youth Employment Scheme (YES)	\$58,500

Measures of efficiency	IAF indicators	Bendigo indicator	Results
	Net inputs	Total inputs less Government Subsidies	\$238,300
Outputs	Change in staff numbers	Increase in number of staff required as a result of program	8 new HSA staff + 0.2 EFT project officer
	Workforce structure	Duties performed by an HSA equivalent to 2.4 RN EFT	\$149,520
	Knock-on workforce impacts	Reduction in drop-out rate in Undergraduate Nurses (1.5 students)	\$54,450
	Total Outputs		\$203,970
	Net cost (benefit)		\$34,330

The net cost of the HSA workforce model (including training and set-up costs) over the course of the first year is \$34,330. The nature of this program is that the HSAs are an apprenticeship type role, and that each year there will be a whole new cohort. These calculations have been based on eight full time HSA positions, however they do not include all input and output elements.

Inputs

Salaries and recruitment: The salaries paid to the HSAs over the duration of the pilot project are calculated at \$29,000 per annum (including oncosts), for each HSA. There were eight HSAs, of which one resigned in December 2009. This is by far the single largest component of the inputs into this pilot program. The key benefit of this particular workforce model design is that by employing school leavers, the program can qualify for both federal and state apprenticeship schemes. The VECCHI (Federal Australian Apprenticeships' Scheme) provides a subsidy of \$1,500 per commencement, and \$2,500 per completed apprenticeship. The Department of Health Youth Employment Scheme (YES) provides a \$2,250 commencement incentive, and the same amount upon completion of the certificate III. In the pilot program, there were two HSAs who did not complete their certificate III, and therefore were not eligible to receive the completion incentive. In total \$58,500 in government subsidies were received by Bendigo Health for the HSA program.

In addition, a well defined recruitment and selection process for the HSA role was implemented at Bendigo Health with the program being advertised across three local VCE providers. Twelve potential applicants were interviewed and eight were selected, following the industrial relations resolution with the ANF. All applicants had nominated a health related university based course for study in 2010. Consultation with nursing staff suggested that the initial year applicants were predominantly focussed on pursuing nursing although the selection criteria included the wider health courses.

The costs of recruitment included advertising costs and three visits to local schools by the project manager. Interview and selection process costs are also considered under this category. We have assumed that a total of 20 hours was required for the recruitment processes.



Training: The HSA trainees completed a Certificate III in Health Services Assistance (See Appendix D). The course was undertaken at the BRIT and consisted of an initial one week face-to-face study block. On completion of the initial week of training, the HSA trainees were provided with two days induction at Bendigo Health and commenced on the pilot wards four days per week whilst continuing at BRIT one day per week over the 12 month period (equivalent to 440 training hours over the year).

The HSA traineeship model was developed in partnership with the Bendigo Health and BRIT, with input from the ANF and based on the National Training Package HLT07. The key aims of the traineeship for Bendigo Health were to ensure that the HSAs operated safely on the ward and that the educational component of the traineeship aligned with Bendigo Health’s policies and procedures.

Although not part of the pilot, the units included in the traineeship have been modified over the past three years to include training in cleaning in clinical settings and assisting in allied health programs and excludes population health training. These changes were in line with feedback regarding gaps in knowledge and the relevance of particular courses.

Several teaching and assessment strategies were put in place to provide support and ongoing learning opportunities for the HSAs. Learning was both face-to-face and experiential on the job.

The HSAs interviewed as part of this evaluation indicated that the initial training of one week duration may not be long enough and that they felt overwhelmed in the initial weeks of ward placement. Trainees suggested that two weeks of initial training supported by practical experience may embed greater confidence in the HSAs during the initial induction period on the ward. Trainees also indicated that the classroom component of the traineeship was highly theoretical and they could potentially benefit from greater practical application during the classroom learning periods. HSAs indicated that overall they benefited from the weekly classroom training, particularly in respect of the ‘debriefing’ session.

During consultation, BRIT also suggested that an initial education period of two weeks (face-to-face) would provide a greater foundation to the HSAs prior to the commencement of ward duties. The NUMs interviewed during consultation identified that the inclusion of the ‘observations’ module in the HSAs training could benefit the wards, alleviating some of the additional requirements of the nursing staff.

The costs associated with training the HSAs include both the cost of the BRIT course, as well as the cost of implementing and structuring the appropriate course material.

Supervision: Consultation with nursing staff and HSAs identified that the daily tasks performed by the HSAs were allocated on an ad hoc basis with reference to the position description and that HSAs reported to the ward NUM.

The supervision of duties performed by the HSAs was either direct or indirect. Direct and indirect supervision are defined by the Nursing Board of Victoria and are related to the Bendigo pilot program as follows:

- Direct supervision: Direct supervision includes when this or another RN is actually present, observes, works with and directs the individual who is being supervised.
- Indirect supervision: when an RN is easily contactable and available for reasonable access but does not directly observe the activity.



There was a project manager providing support to the HSAs in their role, however this was not a full time support role. Additional on-the job supervision is also provided by all the other RNs working on the pilot wards. We have assumed that on average 20% of the HSAs time was spent under direct on-the-job supervision from an RN. With eight HSAs, this results in on-the job supervision of 1.3 RN EFTs. We note that RNs will still be productive with other tasks while supervising the HSAs, so we estimate that half of the supervised time will result in lost productivity. This equates to a cost of \$40,500 per annum in RN wages. We have used RN wages excluding on-costs to arrive at this assumption.

Although there was extensive planning and communication prior to the pilot, negotiation with the ANF in relation to this pilot workforce model was lengthy and impacted the pilot implementation. Consultation with the HSAs indicated that initially the reporting structure was, at times, unclear when the Nurse Unit Manager was unavailable. HSAs also noted that, while a task list had been developed it was rarely used and they initially felt confused about their role. Nursing staff felt that initially, at times, the lack of support provided around role clarity impacted the delegation of tasks to the HSAs.

It was identified in this initial period that a structured and defined set of activities to define and clarify their role would minimise confusion amongst staff members on the ward. This was subsequently developed to support the delegation of tasks to the HSAs.

On the whole, HSAs were satisfied with the level of support provided by Bendigo Health nursing staff and felt confident in asking nursing staff for additional instructions if they were unsure of how to perform a task. The key area for improvement in training and support, as identified by HSAs, is in relation to the area of death, dying and traumatic events.

Outputs

Change in staff numbers: The HSA workforce is intended to support nursing staff. Nursing ratios have remained constant and HSAs operate in addition to current budgeted staff levels. The purpose of the HSAs is to provide support to the nursing team. As a result there was an increase in the overall staff numbers at Bendigo Health as a direct result of the pilot program of eight EFT.

Other staff costs: Other staff costs may include the following: reduction in overtime costs incurred as a result of program, reduction in use of casual staff and a reduction in specialising costs.

The duties performed by HSAs include those which would otherwise have been the work of a variety of staff in each of the wards. To evaluate the efficiency of the HSA workforce, we considered those workforces from which HSAs draw their tasks and the cost of the workload prior to the introduction of the HSAs. We have made some assumptions regarding the proportional split of HSAs working hours into work which previously would have been performed by existing nursing staff, or otherwise gone unattended.

The HSA role is designed to reduce the workload of the nursing staff by performing everyday tasks. Based on the HSAs training and scope of work, the vast majority of tasks being performed by HSAs would otherwise have been performed by nursing staff.

During the course of the year, the HSAs spend one day per week at their BRIT course. We have assumed that 30% of the HSA's time was spent on duties which would otherwise have been performed by nursing staff (either Division 1 or Division 2), in addition to existing service levels at current nurse patient ratios. This assumption is used to determine the benefits of the model and reflects that HSAs are performing tasks that were not previously able to be performed. These tasks included shaving patients, washing hair, using the shower trolley and restocking the supplies throughout the ward. However, it is important to note that a HSA is not a substitute for a registered nurse.



On this basis, the cost saving of the HSAs within the trial would be equivalent to four RN EFT. Assuming the annual wage for a Grade 2 year 10 Registered nurse is \$62,300 (excluding on costs) this equates to a workload output of \$149,520.

Work structure and role definition: The Bendigo Health Workforce Plan 2008-2013 suggested that Bendigo Health would experience a continued shortage in nursing staff, resulting in bed closures. The additional workforce role of HSAs was proposed to provide support for nursing staff. The HSA role was developed by the Bendigo Health NUMs in a workforce planning workshop led by the Executive Director of Nursing, Nursing Resources Manager and the Manager Professional Standards and Education (Nursing). NUMs identified tasks that could be performed by a support role in addition to current nursing ratios. The role was designed to incorporate a six-monthly rotation of the HSAs to provide them with a diverse experience and exposure to different clinical specialities across the hospital.

A broad role description for HSAs was developed for all pilot wards, based on the training program and the individual needs of the pilot wards. The flexibility of the HSA pilot has enabled individual wards to tailor duties based on the specific needs of the ward. This has been seen as a key success factor in ensuring nursing staff on each ward benefit from the relief of lower-end tasks.

The flexibility in the pilot and the abbreviated period prior to implementation resulted in some early confusion in relation to the HSA roles. Early in the pilot, roles were not always clearly defined or communicated, and as a result nursing staff sometimes found it difficult to allocate tasks to the HSAs. HSAs agreed that they were not always clear about their role definition and the associated duties and tasks and in these cases sought the advice of the nursing staff for more guidance. This issue was particularly apparent in the initial stages of a rotation with both HSAs and nursing staff feeling more confident as the HSA became more comfortable with the particular requirements of the ward on which they were working. This illustrates the importance of piloting new workforce models in ensuring that issues such as role definition and clarity are identified and addressed within a confined structure.

Nursing staff interviewed indicated that the HSAs workforce model enabled tasks to be undertaken that were delayed or otherwise not accomplished due to time constraints. These tasks included shaving patients, washing hair, using the shower trolley and restocking the supplies throughout the ward.

Nursing staff would prefer that the HSAs did not rotate every six months, given the level of investment in training, supervision and support that was required initially, however, understood that it was important for the HSAs to gain exposure to various parts of the hospital to assist with their decision to pursue undergraduate studies in health. HSAs on the other hand enjoyed the variety that they experienced in rotations and suggested that they would like more frequent rotations (eg 4 monthly).

Opportunity costs: Two of the objectives of this workforce model were broader than the workforce impact at Bendigo Health. One objective was to expose school leavers to working in the health industry.

Historical data on university completions suggest that nursing undergraduate completion rates have been around 75%² of commencements. Introduction of the HSA program could help to improve the completion rate of undergraduate nursing and potentially other health courses. In 2011, the Australian Government contribution for an undergraduate nursing degree is \$12,093 per student per equivalent full time student load per year. From this initiative, several of the HSAs have gone on to further study in the health professions. It is anticipated that the HSA

² Data from DEEWR

program will provide these school leavers with a practical and realistic introduction to the health workforce. If the HSA program is successful in halving the university drop outs for the school leavers participating, then this would result in a cost saving of one university degree, an opportunity cost saving of \$36,300, which is the cost of one university course. If the HSA program was successful in eliminating university drop outs for the school leavers participating, then this would result in an opportunity cost saving of \$72,600, two university courses for the eight participants.

A further objective was to enable the school leavers to use a 'gap year' before commencing tertiary study to work sufficient hours to meet the Independence eligibility criteria for the Commonwealth Youth Allowance (CYA). Eligibility for the CYA is a significant economic benefit for rural students who frequently have to move from rural areas to major cities to undertake their tertiary courses. Since pilot inception there have been some alterations to the CYA eligibility criteria in respect of the workforce participation criteria, however, the structure of the program still supports eligibility under this scheme. Additionally, a HSA qualification enables students to work in health workforce whilst supporting their study.

Efficiency: Based on the total inputs and outputs of the workforce model, efficiency has been demonstrated. While the model may appear more costly initially it should be considered that there are other potential longer term benefits that are not able to be costed at this point in time. These benefits include staff retention and attraction of future nursing students to the Bendigo area.



3.3.2 Effectiveness

Effectiveness refers to the extent to which workforce and patient outcomes achieve project objectives, cost-effectiveness (outcomes compared to inputs) and the indication of future direct impact of a project (benefits as a proportion of costs) where sufficient data and information are available.

Table 6 outlines the key project-specific effectiveness measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 6: Bendigo Health HSA effectiveness measures

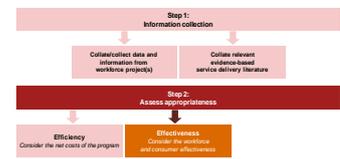
Measures of effectiveness	IAF indicators/Bendigo indicator	Results
Inputs	Pilot program set-up and implementation	\$16,870
Objectives	Short-term objectives	✓
	Medium-term objectives	✓
Outcomes	Workforce indicators	
	Enhanced staff competencies	✓
	Improvements in staff capacity and responsiveness	✓
	Increased staff satisfaction	✓✓
	A more appropriate workforce profile	✓✓
	Patient indicators	
	Improved patient outcomes	~
	Patient experience	✓

Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓
 Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Inputs

Pilot program set-up and implementation: The pilot program was established and managed by the Executive Director Nursing, Nursing Resource Manager and Manager Professional Standards and Education (Nursing) (project leaders). Review of the documentation provided by Bendigo Health indicated the set-up and implementation planning was well organised and detailed. The Manager Professional Standards & Education (Nursing) was responsible for the oversight of the pilot program and all wards were offered the opportunity to have a HSA on their ward. Only those expressing interest were provided with HSAs to obtain maximum buy-in to the project.

A communications strategy was developed to support the roll-out of the HSA pilot program. The Bendigo Health leadership team, including the CEO, were very supportive of the pilot. Given the level of involvement by the ANF, the communications to the nursing staff was limited until agreement between Bendigo Health and the ANF could be reached. The delayed communication had a potential impact on the success of engagement and buy-in of Bendigo Health nursing staff (it was noted in consultation that not all nursing staff were engaged in the process). However all hospital staff were invited to attend information sessions and received weekly updates in the *Nursing News*.



A steering committee including representatives from the ANF and BRIT was established to monitor the set up and implementation of the pilot program and met every second month to discuss the program and relevant issues.

The planning for the new role was extensive. Research was conducted to understand the key workforce drivers of Generation Y to establish a role that was aligned to Generation Y objectives to increase interest and enthusiasm in the traineeship. A literature review was conducted to investigate the success of similar programs throughout Australia. The shape of the role was further scoped with NUMs to identify the key tasks and duties that could be performed by a support role.

Implementation costs of the pilot program were approximately \$16,900. This includes costs for the following:

- Literature review
- Develop HSA role description
- Establish relationship with education provider to explore a specific training program for HSAs
- Two monthly progress report on the pilot program, as part of the steering committee
- Interim report on the pilot program
- Final report on the pilot program
- Overheads including stationary.

Objectives

Short/medium term: Bendigo Health established the following objectives as part of the HSA pilot program:

- To enhance workforce capacity and health service delivery at Bendigo Health by implementing an HSA role
- To engage with key stakeholders to identify and scope the HSA role
- To develop in collaboration with BRIT, a comprehensive Certificate III HSA qualification to adequately prepare participants to safely undertake the role
- To enhance patient experience via the additional services of an HSA
- To enhance health professional satisfaction and retention by providing additional unit based support
- To expose school leavers, via a ‘gap year’ program to the health system with the aim of influencing career decisions towards health.

Overall commentary from consultations with both the Bendigo Health and BRIT indicated that the short-medium term objectives of the HSA pilot had been reasonably well achieved. Evidence of this achievement is provided through the discussion contained in this section of the report. The objectives have remained the same throughout the pilot project period.

Outcomes – Workforce

Enhanced staff competencies: The competencies in this pilot program are the additional workforce competencies brought onto the ward by the HSA staff. The key objective of the HSA role was to provide additional capacity to provide existing services.

We have allowed no impact on the evaluation from changes in staff competencies.

Staff capacity and responsiveness: Consultation conducted in this evaluation with management and nursing staff identified that the HSA pilot project had assisted to improve staff satisfaction in terms of completing work and enabling registered nurses to focus on more clinically orientated tasks and improving the overall quality of patient care.



Staff attitude to the introduction of the HSAs was measured through nursing staff and HSA focus groups, surveys and feedback forms. The focus groups held by Bendigo Health as part of the evaluation process, included eight nurses across the three of the four clinical areas where HSAs were working.

A summary of the comments from the nurse focus groups in respect of the impact to staff capacity were provided in the final evaluation report prepared by Bendigo Health:

- *‘Although there were initial difficulties with role definition, these were soon resolved, with the HSA role having a positive effect on the nurses’ work.’*
- *‘The HSAs made a big difference to the way that the nursing team were able to deliver patient care. It was agreed that the availability of the HSAs to carry out simple tasks and errands leaves more senior staff free to do those tasks only trained staff are able to do.’*

In addition to the focus groups three surveys were conducted, at four, eight and twelve month intervals during the pilot program (n=40). The survey used a Likert scale format. All survey respondents had worked directly with a HSA. The surveys indicated the pilot had assisted to improve access to timely care for patients. The communication strategy for outlining the HSA role description was highlighted as an essential aspect to the successful implementation.

While it is difficult to quantify whether the nursing staff needs and expectations have been met through the HSA pilot, a number of comments obtained through the surveys provide anecdotal evidence to support that this is the case, with the majority of the respondents rating the effect that the HSA had on their role as generally positive, improving over the 4 monthly intervals. Other comments in support of the HSA role provided by nursing staff in the surveys included:

- *‘The HSAs have become a very important part of the unit’*
- *‘Valuable members of multi-disciplinary team in ICU. Extremely helpful to deliver timely nursing care’*

On the other hand, the lack of role clarity at the beginning of the pilot program was evident in a number of survey responses:

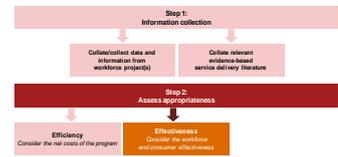
- *‘Initially the HSAs had difficulty knowing what they could and couldn’t do, as well as nursing staff.’*
- *‘Find they need a lot of direction. At start of year they were unsure of their role, what could/couldn’t do, towards the end of year, they became more competent and experienced’*

Feedback forms were also collected throughout the pilot program; comment was made regarding the impact on the quality of care provided by Bendigo Health since the introduction of the HSA role:

- *‘Quality of care around the ward has improved when the HSAs can give time to patients. I think they are an excellent addition to the medical ward’*
- *‘Exceptional assistance to clinical staff in preparing department. Their actions are vital to keeping nursing staff focused on patient care at the bedside.’*

Increased staff satisfaction and retention: Was reported during the pilot program, this was noted in both the nursing focus group and surveys. When asked how the HSA has contributed to their workload, nurses’ responses in the focus groups and surveys included:

- *‘it was felt, having HSAs on their units, meant nurses could go home a lot more satisfied at the end of their shift, having achieved optimum care for patients’*
- *‘nursing staff notice a huge difference in workload’*
- *‘I believe without the HSAs working on rehab in this time that I would have ha[d] nursing staff resignations, especially from Div 1 staff. This is because of extra clinical support on the ward due to the increasing complexity of the patients’*



Survey responses regarding work satisfaction indicated that the HSAs had a positive effect on satisfaction improving significantly overtime (100% of responses provided at the end of 12 months scored ‘5’ or greater on the Likert Scale of 7 for this question).

When respondents were asked about nurse retention in the survey, responses were mixed in the initial period but became generally more positive in the final survey (100% of responses provided at the end of 12 months scored ‘4’ or greater on the Likert Scale of 7).

Appropriate workforce profile: A more appropriate workforce profile relates to a better alignment between skill mix and duties required and results in improved staff morale, and reduced stress on the existing workforce. The introduction of HSAs has provided RNs the time to be able to provide greater attention and service to their existing patient base.

There is evidence in the survey responses collected by Bendigo Health, with a large proportion of nurses on the pilot wards surveyed, agreeing that they believed the HSA roles had a positive effect on their work, rating it between reasonably positive and very positive consistently over the three survey intervals (97.5% of respondents rating ‘5’ or greater at the end of 12 months, in respect to the impact of enabling nurses to deliver care to patients). In particular, one nurse commented that *‘They have enabled nurses to concentrate on more intensive care for patients’*.

Outcomes – Patient

Improved patient outcomes: Limited evidence was collected regarding the impact of the HSA role on patient outcomes. The main focus was the impact of the HSA role on patient experience. HSAs were asked to rate the perceived impact on the patients on the ward, with most (97.5% at the end of 12 months) indicating that they had a reasonably positive impact on patients.

Patient experience: Anecdotal evidence gathered during the surveys and focus groups with both nurses and HSAs indicated that patient satisfaction was positive. In addition, some nursing staff provided the following comments:

- *‘One patient’s last days were very much enhanced and brightened by his conversations with the HSA’*
- *‘Patients love having HSAs on the ward as they have time to do the little things that nursing staff can get too busy to do’*

No further evidence was collected regarding the impact on patient experience.

Effectiveness: The measure of effectiveness was based predominantly on the qualitative data collected. On this basis, the workforce model was of benefit to Bendigo Health and effective for its purpose.



3.3.3 Sustainability

Sustainability is the assessment of the impact of the new workforce model on workforce and structural stability in the longer-term, including an assessment of known and future risks.

Table 7 outlines the key project-specific sustainability measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 7: Bendigo Health HSA sustainability measures

Measures of sustainability	IAF indicators/Bendigo indicator	Results
Objectives	Long-term objectives	✓
Outcomes	Workforce indicators	
	Feasible workforce requirements in the long-term	~
	Adaptability of the workforce to change in processes/skills	✓✓
	Workforce retention/recruitment	✓
	Risks (environmental, political, occupational)	~
	Health workforce profile	✓
	Patient indicators	
	Continuity of care	~
	Acceptability of future model delivery	✓

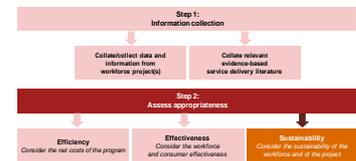
Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓
 Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Objectives

Long term: The Bendigo Health HSA workforce model is to provide support for nursing staff and to provide quality patient care. Success of the HSA program moving forward will depend upon the mechanisms in place to support sustainability.

During consultation, nursing staff indicated that greater communication regarding the role of the HSAs would enhance the acceptance and therefore use of HSAs on the wards. The selection criteria for any new HSAs should also be explicit in detail relevant to the applicant’s interest in a health career.

The pilot program was not cost neutral and it was difficult to measure the cost benefits of the HSAs, though the intangible benefits of the HSAs were many. Evaluation of the HSA program over a longer time frame to capture the broader health system and community outcomes of the program may be valuable.



Outcomes – Workforce

Feasible workforce requirements in the long-term: The workforce outcomes we have identified in the previous section are the measurable benefits from the introduction of HSAs in each of these wards. In the longer term, it is anticipated that although these benefits will remain, they will be changed from what we observe them to be at the present moment.

Given that the HSAs are employed for a ‘gap year’ and will therefore be replaced on an annual basis, it is unlikely that efficiencies will be realised as the nursing staff will be required to continually train the HSAs as they are introduced in the wards. Efficiencies should arise around induction as role definition improves.

The satisfaction and increased morale experienced by the nurses due to the introduction of the HSAs will likely diminish over time as they become a part of the standard workforce in the hospital.

Adaptability of the workforce to change in processes/skills: The introduction of the HSAs under this workforce model has shown the adaptability of the existing Bendigo Health workforce in their ability to accommodate these additional staff. There is no requirement for the current workforce to change processes or current skills. The HSA role operates in addition to current nursing staff. The introduction of the HSA role at Bendigo Health may be seen as a distinguishing feature of Bendigo Health from other peer hospitals. The HSA role demonstrates Bendigo’s investment in its nursing staff, the provision of support for staff and the overall attention to delivering high quality patient care and services.

It was found that the HSAs in the pilot wards reduced the workload and stress levels on existing nursing staff. As a result, this may lead to Bendigo Health being an employer of choice for nursing staff. This may attract greater nursing talent to the Bendigo region, and have flow-on benefits far into the future. In addition, the exposure provided to the HSAs may increase the desirability of Bendigo Hospital in the graduate application process.

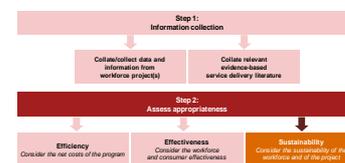
Workforce retention/recruitment: Workforce satisfaction in the longer term should translate into greater retention and lower recruitment costs. If Bendigo Health is seen by the nursing workforce as an ‘employer of choice’, balanced with the current nursing vacancy rate, it may mean that existing staff are more likely to remain, and vacant positions may be more easily filled with experienced and quality staff. These productivity gains and recruitment costs can be significant in the longer term.

The nature of the HSA workforce requires investment in an annual recruitment process. The development of recruitment and ward induction processes is required to maximise efficiency. Nursing staff surveyed indicated that the project ‘*prompts young people to study nursing*’ and was ‘*positive in recruiting nurses and other health professionals*’. It was felt that the provision of such a workforce model may improve the retention rate for nursing.

However, since the change in the Australian Government Austudy independence qualifications, the desire for students to undertake a ‘gap year’ has declined. Therefore, if this program was to expand, the recruitment of appropriate workforce may become complex and unsustainable.

Nursing staff identified the importance of the need for the HSAs to express interest in nursing as part of satisfying their selection criteria for employment. It was further agreed that the ‘health’ undergraduate criteria applied in some instances may have been too broad for the activities performed by the HSAs, however, at least two HSAs who had enrolled in other ‘health’ degree courses changed their preferences to Nursing after undertaking work experience as a HSA.

Risks (environmental, political, occupational): The HSA role definition is considered the key risk associated with sustainability of the project. Another risk is recruitment and training and the associated sustainability of the recruitment and training process, particularly related to the nursing staff buy-in into this repetitive process.



Health workforce profile: The pilot has changed the workforce profile at the Bendigo Health through expanding to include a new role. The new more appropriate workforce profile supports a better match of skills required to undertake necessary tasks. A key platform in maintaining the new and positive workforce profile is clear communication of roles and responsibilities both to staff and external stakeholders and clear understanding of how the model relates to existing industrial instruments.

Patient indicators

Continuity of care: The HSA role at Bendigo Health is a contributing factor to the improvement in the continuity of care for patients on the pilot wards. Staff and patients feedback indicated that the quality of care was of a high standard and attention to the small tasks, that often make a considerable difference to a patient, had increased.

Sustainability: The above commentary provides an assessment of workforce and structural stability in the longer-term, including an assessment of known and future risks. From this analysis the workforce model is sustainable in the Bendigo Health region.

Key findings – Appropriateness

Efficiency

- Recruitment of the HSAs was targeted at health undergraduates, with nursing being the preferred undergraduate course.
- By employing school leavers the program can qualify for both federal and state apprenticeship schemes plus the Department of Health Youth Employment Scheme (YES) offsetting the costs to Bendigo Health by \$8,500 per HSA.
- HSAs and BRIT indicated that the initial training of 2 weeks duration would be beneficial.
- Supervision and clinical support was provided by RNs both directly and indirectly.
- The role of the HSAs was developed in consultation, however communication is required to support front-line staff in supervising the HSAs.
- The rotation of the HSAs to different wards enhanced their overall experience during the 12 month traineeship but impacted the workload of nursing staff during the initial rotations and training periods.
- Wide communication of clear HSA role definitions, duties and tasks benefits both the nursing staff and HSAs.
- The net cost of the program is a net cost of \$34,330 per annum, after having received the \$58,500 in government subsidies.
- There net costs of the program in future years is expected to be similar to that of the first year of implementation as new HSAs are recruited annually, however there will be some efficiencies as the project will be easier to manage the second time around, and there are overall benefits to the health system and the HSA returning to tertiary study.

Key findings effectiveness

- There was executive support and leadership for the HSA pilot project.
- The communication strategy enabled engagement of key stakeholders, however, due consultation with the ANF the timings of execution were delayed, potentially impacting the successful and timely engagement of stakeholders.
- There was some initial confusion among the nursing staff of the role of the HSAs.
- There has been improved staff satisfaction and retention since the implementation of the HSA role and continued support for the pilot.

- Anecdotal commentary demonstrated a positive impact on the overall patient experience.
- No significant improvement in patient outcomes could be concluded based on the available information.

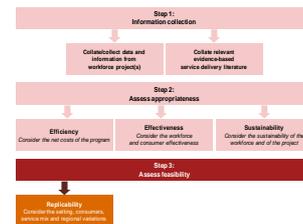
Key findings - Sustainability

- The long term objective of the Bendigo HSA workforce model is to provide support for nursing staff and to provide quality patient care.
- The HSAs reduce the workload and stress levels on existing nursing staff. This may lead to Bendigo Health becoming an ‘employer of choice’.
- The annual recruitment process for HSAs requires clearly defined and implemented processes to avoid being costly and inefficient.
- The change in the Australian Government Austudy independence qualifications has reduced the desire of students to undertake a ‘gap year’. The recruitment of an appropriate workforce may be unsustainable.
- Workforce satisfaction in the longer term may translate into greater retention of nursing staff, increasing productivity and reducing recruitment costs.
- The key risks of the program are related to role definition and the sustainability of the ongoing recruitment and training of HSAs
- Clear communication of roles and responsibilities (for all positions) to staff and external stakeholders are crucial to the ongoing success.

Appropriateness: The measures of efficiency, effectiveness and sustainability demonstrate that this workforce model is an appropriate model for consideration in future workforce reform particularly in areas facing similar staffing challenges to that of Bendigo Health.

3.4 Step 3: Assess feasibility

The evaluation undertaken was a retrospective review. Determining the feasibility of the HSA pilot project was based on the data available from Bendigo Health. In terms of efficiency some quantitative data were available. In terms of effectiveness the majority of data available were qualitative. The evaluation of feasibility was therefore undertaken based on a combination of both qualitative and quantitative data.



3.4.1 Replicability

Replicability is an assessment of a new workforce model’s feasibility in terms of replicable settings, the service mix, regional and State variations and the impact on patient/patients.

Settings: The HSA workforce model may be applied to most hospital wards across medical, surgical and specialty areas. The ability to provide assistance in various clinical settings has been demonstrated with the pilot application across four different specialties, including the emergency department.

The HSA workforce model may be rolled out to any hospital ward that provides the appropriate supervision and support for HSA trainees, including hospitals with similar vacancies to Bendigo Health.

Patients: The patients that will be impacted by the addition of the HSA role will be those on the wards where the HSA role is provided in addition to the current nurse patient ratios. As the HSA role has operated in addition to current staffing and nurse-patient ratios the impact on the workforce would be seen to be positive. The HSA role is perceived to increase service accessibility and improve patient satisfaction and potentially patient outcomes. The HSA provides registered nursing staff with the ability to complete more clinical tasks by undertaking duties such as restocking, showering, feeding and toileting that may otherwise be delayed or missed.

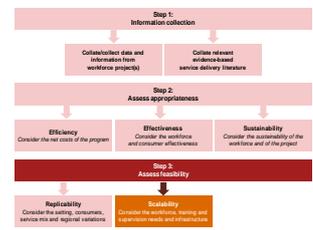
Range and volume of service: The services provided by the HSAs are outlined as per the duty list developed and include local variations dependant on the ward where the HSAs are operating. The volume of service provided by the HSAs is difficult to quantify. Given that the workforce model provides additional staff resources there is no minimum volume required for it to be replicable.

Recommendations surrounding variations in the actual roles description were raised. To be replicable, the role should be clearly defined with specific inclusions of practice for the emergency department, general medical, general surgical and specialty wards. However the need for a level of flexibility was noted.

Ongoing costs: We have estimated the costs of replication of Bendigo Health’s HSA pilot program for the implementation of one HSA.

These cost estimates are based on the data that were available and used to estimate the cost of the overall HSA pilot program. As such, a number of assumptions have been generated in order to calculate an estimate of the costs in metropolitan and regional/rural locations.

The implementation of a HSA in a regional hospital and with similar workforce vacancy issues is estimated at a net cost of \$18,500 per HSA in the first year. This cost may be reduced by available government subsidies of up to \$8,500 per HSA, which the Bendigo program has taken advantage of.



3.4.2 Scalability

Scalability is an assessment of a new workforce model’s feasibility in terms of the scalability of the workforce, training and supervision needs and necessary infrastructure requirements.

Workforce: The HSA workforce was trialed as an additional position not intended to replace other positions. The HSA role does not require pre-existing qualifications, rather training provided on the job through a traineeship model.

The specific nature of the workforce may be somewhat constrained based on the appetite for the ‘gap year’ program from the pool of potential applicants. This may be increasingly difficult given the changes to the Australian Government Austudy requirements and the regional location of Bendigo Health. However there have been sufficient applicants in the initial and subsequent years of the existing program.

Training and supervision: As the number of HSA positions increase there will be an additional requirement for external training and internal organisational supervision and delegation of work duties.

A partnership between the health service where the HSAs are employed and the relevant educational institution is a key element to be considered in terms of scalability. The BRIT indicated that they were very keen to reproduce the Bendigo HSA model in partnership with other Victorian hospitals and had already introduced similar training programs in private hospitals in the area.

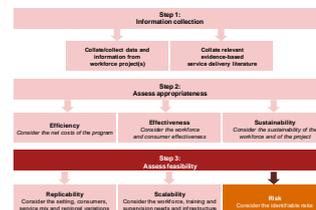
Commitment at the executive level of the hospital was also a key element of success. This assisted a smooth implementation and ensured that the appropriate supervision structures were in place. Supervision of the HSA workforce is of key importance particularly in scaling up the program. Supervision provided by both the hospital and the educational institution are required to ensure staff are well trained, competent and undertake work tasks in a manner that is safe for both patients and other staff. It is important to ensure that where there are existing vacancies in nursing staff that current nursing staff have the capacity to provide supervision for the HSAs and are support to do so within their organisation.

The HSAs consulted also noted the importance of debriefing sessions at both the weekly training days as well as on the ward with nursing staff. Therefore, it is important that structured support mechanisms are established to support the development of the HSAs.

The key issues related to the scalability of the HSA program relate to concerns expressed by the ANF in relation to the HSA role. These issues cover three areas:

- The perceived addition of unregistered workers to the nursing workforce in Victoria
- The defined role of practice of the HSAs
- The structures for supervision.

As noted previously several meetings between the ANF and Bendigo Health were held in an attempt to alleviate these concerns and provide evidence of the processes in place to address these. BRIT also commented on the initial difficulties at the outset of the pilot, including the acceptance of the new role in Victoria and the industrial issues. The structure of the steering committee assisted in alleviating concerns throughout the pilot of the new workforce model. There was widespread support for the continuation of the HSA workforce model following completion of the 12 month pilot.



1.1.1 Risks

The following key risks that may impact the feasibility of the wider implementation of the HSA workforce model have been identified:

- Support of the workforce model by the ANF
- Sustainability of the recruitment and training process.

Stakeholder support

The ANF and their members were concerned with the initial pilot program and specifically the appropriateness of the HSA role and the unregistered nature of the HSA workers. The definition of the HSA role was critical to the initial acceptance by the ANF.

Involvement and ongoing consultation with key stakeholders up front can assist to encourage buy-in and support from external stakeholders such as the ANF when implementing a new workforce model. This should improve the feasibility for successful and sustainable program implementation into the future.

Sustainability of recruitment and training of HSAs

This workforce program requires annual recruitment and training of HSAs. The feasibility of the workforce model will therefore be dependent up on the willingness for the hospital to continue to repeatedly invest in the program.

The positive impact on the retention of nursing staff and students should therefore be noted and communicated to assist with the promotion of the program.

Key findings

- The impact of the HSA role on the wider workforce was positive.
- The HSA workforce model may be applied to most hospital wards across all clinical areas where appropriate supervision and training are provided.
- There is continued support for the new workforce model.
- The HSA role has operated in addition to current staffing and nurse-patient ratios
- The need for flexibility in these roles was noted.
- There is limited support for the Bendigo Health HSA model from the ANF. Concerns include: the addition of unregistered workers to the nursing workforce in Victoria, the role definition and the structures for supervision
- Strong executive support and communications were imperative.
- Feasibility is dependent upon the ongoing commitment to the investment of recruitment and training.
- The pool of potential applicants may diminish due to changes to the Australian Government Austudy requirements.
- There have been sufficient applicants in all years of the program.

Feasibility: The above commentary provides an assessment focusing on replicability, scalability and risks associated with the broader roll out of the workforce model. The above analysis shows that this model is feasible for roll out to other hospitals across the State that face similar workforce issues to Bendigo Health.

3.5 Recommendations

As the program appears efficient and effective in achieving its objectives, we recommend that the program continue at Bendigo Health, with consideration given to the following recommendations. In light of Bendigo Health’s unique position as related to workforce shortages, this model may only be replicable and appropriate in similar regional areas facing comparable recruitment issues, concerns about the sustainability of the nursing workforce and staff vacancies.

As with any innovative workforce model, Bendigo Health in leading the way encountered situations that required careful and active management. Costs incurred during these processes may not be replicated in future implementation of the model.

Reflecting on the lessons learned from the Bendigo Health pilot and the evaluation findings, key recommendations are made for amendments to the existing model as it continues in its current location. Consideration of these recommendations should be made if the model is to be replicated and expanded to other health services.

Key recommendations

Define HSA role	<p>Roles and responsibilities for the HSAs should be clarified and documented and communicated to all nursing staff and external stakeholders. Annual review of the roles and responsibilities should occur to reflect any changes in practice. The education of new staff members is important to ensure that they are aware of the role of the HSA.</p> <p>Roles and responsibilities can be refined based on the different requirements in each clinical area; however, an overarching role description should be in place.</p>
Supervision of HSAs	<p>A position description for HSAs including supervision structures should be confirmed and monitored to identify any variations in practice or supervision.</p>
External stakeholder engagement	<p>Key stakeholders should be consulted throughout the pilot program from development to evaluation. Following the completion of this evaluation there is an opportunity for Bendigo Health and the ANF to meet and further discuss the pros and cons of the HSA pilot model to allow all members to have an opportunity to comment on the model.</p>
Support mechanisms	<p>Structured support mechanisms should be in place to provide HSAs with formal debriefing sessions both in the educational and clinical environments.</p>
Recruitment and training	<p>Continue to investigate the ongoing feasibility of the annual recruitment and training program and the appetite for a permanent position. This is of particular importance due to the changes in the Australian Government Austudy funding prerequisites.</p>

4 *Austin Health – Health Assistant (Nursing)*

4.1 *Overview*

In 2008, Austin Health conducted a feasibility study looking at nurses' views and attitudes to current workload issues and the idea of introducing an 'assistant' role to compliment the role of nursing.

As a result, the Health Assistant (Nursing – HA(N)) Pilot Project commenced in July 2009 with the introduction of six Health Assistants across three wards: 6 East, 7 West and 8 North. The trainees³ recruited completed a Certificate III in Health Services Assistance whilst working as an additional member of the ward and nursing teams on the pilot wards.

The HA(N) role focused on activities of daily living and other related duties such as: hygiene, toileting, manual handling, feeding, bed making, documentation and restocking of ward supplies. The objective of this role was to offer support to the highly skilled Division 1 and Division 2 nurses on a ward, with appropriately trained staff. The need for this support was related to increased patient acuity and complexity. In addition, the amount of specialising work had significantly increased work pressures.

The HA(N) role operated in addition to current nurse-patient ratios required in Victorian public hospitals and met all requirements of the existing industrial instruments.

³ It should be noted that six trainees were initially employed as HANs at the Austin. However costings have been based on four trainees as two trainees did not complete the 12 month traineeship program.

4.2 Step 1: Information collection

Evaluations were performed by piloting organisations during and after the completion of the pilot studies. The data collected for this evaluation included patient and staff surveys and information from consultations with relevant stakeholders.

Data from the evaluations as well as the evaluation reports and findings were used in the process of evaluating these projects using the IAF.

There are a number of key information sources that were reviewed as a component of the evaluation prior to the consultation phase. These included:

- Pilot progress / evaluation reports
- Training guidelines
- Position descriptions

Following the consultation phase a data request was submitted to Austin Health for additional and more detailed data against the individual IAF indicators, these included:

- Cost of training HA(N)s and setting up the training program
- Costs of any new equipment or 'set up' once-off costs incurred in setting up program
- Cost of the time which existing Division 1 and Division 2 staff will spend in supervising and teaching HA(N)s on the job (This may be offset by cost efficiencies of the HA(N) in their role)
- Costs of hiring HA(N)s (payroll setup, uniforms, supplies, ongoing recruitment costs)
- Salary cost of HA(N)s (\$ per hour x hours per week)
- Time between patient's buzzer and being attended to
- Occasions of service a) service by HA(N)s in attending to patient needs, b) additional patient occasions of care which Division 1 and Division 2 nurses can now provide
- Reduction in : a) sick leave, b) staff turnover, c) absenteeism, d) workers compensation claims
- Reduction in adverse events, falls, incidents, and customer complaints.

Information and data, where available, were provided by the Austin and have been used throughout this section of the report.

4.3 Step 2: Assess appropriateness



4.3.1 Efficiency

The measure of efficiency is looking at the net results of the workforce model after inputs and outputs into the program.

Table 8 outlines the key project-specific efficiency measures and indicators. For each indicator the results have been included. Following the table is the rationale behind each of the results.

Table 8: Austin Health HA(N) efficiency measures

Measures of efficiency	IAF indicators	Austin indicator	Results
Inputs	Salaries and recruitment	Wages for 4 HA(N) trainees for 12 months of trial ³	\$114,300
		Wages for 4 fully trained HA(N)s for 12 months (after first year)	\$160,512
	Other Staff costs	Change to overtime and agency costs	- \$90,000
	Training costs (Once per HA(N))	RMIT Course costs (for 4 HA(N)s)	\$30,000
		RMIT Course costs (after first year)	\$7,500
	Supervision costs	Clinical support nurse wage	\$61,000
	Supervision costs	On the job training by supervising RN	\$43,500 first year \$10,000 p.a. thereafter
Total inputs			\$158,800 (first year) and \$149,012 p.a. after
Outputs	Change in staff numbers	Increase in number of staff required as a result of program	4 new HA(N) staff + 1 clinical support nurse
	Workforce structure	Changes in redistribution of duties from RN to HA(N)	\$102,000
		(2,400 hrs year 1)	\$155,000

Measures of efficiency	IAF indicators	Austin indicator	Results
		(3,040 hrs year 2+)	
Total Outputs			\$102,000 p.a.
Net cost			\$56,800 Cost in Year 1 \$6,000 Benefit after Yr 1

The net cost of the HA(N) program (including training) over the course of the first year equates to \$56,800. However for each year thereafter the benefit of the HA(N) role is \$6,000. These calculations have been based on the workload of the HA(N)s.

Inputs

Salaries and recruitment: The salaries paid to the HA(N)s over the duration of the pilot project are calculated as \$19.86 per hour with an average 38 hour working week. Total salary costs for HA(N)s over the course of the year, excluding training costs, equate to \$114,300 in total, or \$28,575 per HA(N). This is by far the single largest component of the inputs into this pilot program. In total, the HA(N)s in the pilot program produced approximately 5,800 hours of work.

The work output for this initial 12 month period would be expected to be lower than the output expected in the next twelve months. The first twelve months includes 20 weeks where the HA(N)s are only working 4 days a week and attending the RMIT course 1 day per week. Once the training is complete, in later years, the HA(N)s will be able to be utilised fully. A fully trained HA(N) working full time would be expected to produce 1,824 hours of work at \$22 per hour, with a total annual wage of \$40,128 per HA(N).

A well defined recruitment and selection process for the HA(N) role was implemented at the Austin Hospital. Over 300 applications were received for the six HA(N) positions of the pilot program. Applicants were required to provide a handwritten letter and a statement identifying their specific interest in the role. Information evenings and one-on-one interviews were conducted prior to the selection of the successful HA(N) candidates. The selection criteria established for recruitment appeared to capture the appropriate personnel for the HA(N) role.

No information was provided on the cost of recruiting HA(N)s. This has been assumed to be captured in the salary costs of the project officer who has been created to support and supervise HA(N)s. Of note during the recruitment process was the large amount of interest in the role and the obvious un-tapped potential workforce pool for support level workers.

Total salary costs are \$114,300 for the four HA(N)s, which is an average cost of \$28,575 per annum per HA(N) employed.

Other Staff Costs: During the pilot a reduction of \$90,000 in agency staff costs was seen across the three wards where HA(N)s were introduced. Historically, non-nursing agency staff cost \$38.91 per hour, and specialising staff cost \$43.97 an hour. This is a significant cost saving when considering that fully trained HA(N)s cost \$22 an hour. This is a direct cost saving of the HA(N) initiative. This cost is not expected to significantly change in later years of implementation.

The total saving from other staff costs is \$90,000 per year across three wards. This may be attributed to \$22,500 per HA(N) employed. It is important to note, each additional HA(N) employed may not necessarily result in a \$22,500 cost saving. This is because there will be a minimum point to which these costs can be reduced.



Training: The Austin HA(N) trainees completed a Certificate III in Health Services Assistance (See Appendix D). The course was undertaken at the RMIT and consisted of an initial three week face-to-face study block followed by a one week placement at a residential aged care facility. On completion of the clinical placement the HA(N) trainees commenced on the wards four days per week whilst continuing at RMIT one day per week for a period of 20 weeks.

The HA(N) traineeship model was developed in partnership between the Austin Hospital and RMIT. The key aims of the traineeship for the Austin were to ensure that the HA(N)s operated safely on the ward and that the educational component of the traineeship aligned with the Austin’s policies and procedures. Competencies were structured to enable the HA(N)s to begin work on the designated wards immediately following the first four weeks of training with the focus on ensuring the HA(N)s were functional and safe.

Consultation revealed that several teaching and assessment strategies were put in place to provide support and ongoing learning opportunities for the HA(N)s. These included a log book, reflective journals, an Austin Health supervisor and the RMIT teacher/supervisor. Learning was both face-to-face and experiential on the job.

The HA(N)s interviewed as part of this evaluation reported that the initial training and clinical placement provided them with the confidence required to commence work on the designated wards. Overall the classroom component of the traineeship was considered to be well delivered and gave the HA(N)s a sound knowledge base. Additional feedback, indicated that the traineeship was considered by some HA(N)s to have been lengthy in duration, particularly as the wage was thought to be low.

The second round of consultation (undertaken with the Austin staff during May) indicated that staff agreed that the provision of one week of supernumerary time in the induction period was sufficient and worthwhile. However feedback also indicated that the HA(N)s clinical knowledge was less than that of regular nursing staff and team nursing was therefore important.

The RMIT engaged a consultant to provide subject matter expertise and assist with the Health Assistant course development process. The consultant provided assistance with the:

- development of a matrix for both the delivery and assessment components of the program
- development of a log book for the HA(N)s to record activity that was rigorous but not onerous
- guaranteeing that the student HA(N)s would be work-ready following the initial four weeks of training.

The costs associated with training the HA(N)s include the cost of the RMIT course, as well as the cost of implementing and structuring the appropriate course material. The overall training cost is equivalent to \$30,000, this equates to approximately \$7,500 per HA(N). The HA(N) workforce can be compared with the Assistant in Nursing Workforce which has an average turnover of one in for staff per year⁴. It may be expected that training costs of \$7,500 per HA(N) are required on an annual basis if the program continues with only 4 HA(N) staff.

Supervision: Duties undertaken by the HA(N)s at the Austin were delegated on a shift by shift basis by the nurse in charge of the shift. Supervision thereafter, by a registered nurse, was either direct or indirect. Direct and indirect supervision are defined by the Nursing Board of Victoria and are related to the Austin pilot program as follows:

- Direct supervision: a clinical support role RN was created to support and supervise the HA(N)s in the pilot wards. This direct supervision also includes when the RN is actually present, observes, works with and directs the individual who is being supervised.

⁴ From National Institute of Labour Studies (NILS); Research project: National Aged Care Workforce survey and Census, 2007



- Indirect supervision: when the RN is easily contactable and available for reasonable access but does not directly observe the activity.

The clinical support RN provided supervision to the HA(N)s, the cost of which was their salary of \$61,100. Additional on-the-job supervision was provided by all other RNs working on the pilot wards. We have assumed that on average 20% of the HA(N)s time was spent under direct on-the-job supervision from an RN. This results in on-the-job supervision costs of \$43,500 per annum, assuming that RN wages are on average \$42 per hour. However it is also acknowledged that RNs can appropriately supervise HA(N)s while undertaking other duties.

Reporting lines and supervision structures across the three pilot wards varied. The HA(N)s were initially assigned to specific staff members on each shift. However as the HA(N)s gained more experience in their role and progressed through the traineeship the assignment and reporting processes evolved. Pilot wards reported that some HA(N)s were able to independently manage their own day and team nursing was in place across the ward. However it was noted that it is important that all nursing staff are cognisant of the ongoing requirement for appropriate supervision for HA(N)s including any new nursing staff that may join the team. Furthermore, the RMIT indicated that supervision processes for the HA(N)s were well structured with one full time supervisor in place at the Austin to oversee the HA(N)s and liaise with key stakeholders including the NUMs, ward staff and RMIT staff.

Strong team work and support for the HA(N)s was noted on the pilot wards. On the whole the RNs and HA(N)s interviewed reported that they were very satisfied with the support provided both for the pilot program overall and individually.

In contrast, the ANF identified that there was the potential for confusion at the Austin in reporting lines relevant to the HA(N)s and further information provided to the ANF in relation to these reporting guidelines would assist provide reassurance and clarity.

Outputs

Change in staff numbers: The HA(N) workforce is intended to support the existing nursing workforce. Nursing ratios have remained constant and HA(N)s operate in addition to current budgeted staff levels. HA(N)s provide additional support to the nursing team. As a result there was an increase in the overall staff numbers at the Austin as a direct result of the pilot program of 4 FTE.

Other staff costs: These costs may include the following: reduction in overtime costs incurred as a result of the workforce model, reduction in use of agency staff and a reduction in specialising costs.

The duties performed by HA(N)s frequently comprise small activities and include those which would otherwise have been the work of a variety of staff in each of the wards. Therefore, to evaluate the efficiency of the HA(N) workforce, we considered those workforces from which HA(N)s draw their tasks and the cost of the workload prior to the introduction of the HA(N)s. We have made some assumptions regarding the proportional split of a HA(N)s working hours into work which previously would have been performed by existing nursing staff, or otherwise would have gone unattended.

The role of the HA(N) is designed to reduce the workload of the RN by performing fundamental patient care tasks and the vast majority of tasks being performed by HA(N)s would otherwise have been performed by RNs.

Using the scenario that 80% of the HA(N)s working time was spent on duties which would otherwise have been performed by an RN, then the cost saving of the HA(N)s within the trial would be equivalent to \$192,000 over the twelve month trial (assuming the RN wage is \$42 per hour).

In the twelve months following the pilot, this amount of work output is expected to increase as the HA(N)s become fully utilised and increase their work efficiency. The efficiency of HA(N)s over the longer term may be expected to



increase as they become more adept in their role and require less nursing supervision. The cost saving of the HA(N) is projected to be \$155,000 for later years.

The role of a specialising nurse can, in some instances, be performed by a HA(N). In all three pilot wards there was a marked reduction in the use of specialising hours, with an overall reduction of 362 hours (or 30% over the 12 months of the pilot program).

Work structure: The role description for the HA(N)s was determined via a ward consultation process involving both registered and enrolled nurses. A guide to the duties that can be performed by a HA(N) was subsequently created. In addition the HA(N) role and duties were individually tailored to the specific pilot ward on which the HA(N) was employed, that is surgical, medical or specialty (stroke). The flexibility of the HA(N) pilot has enabled individual wards to tailor duties based on the specific needs of the ward. This flexibility has been identified by stakeholders as a key success factor of the workforce model.

The addition of the HA(N)s has enabled tasks to be undertaken that were delayed or not otherwise accomplished due to time constraints. Examples of these tasks included shaving patients, washing hair, using the shower trolley and feeding patients while their meal was hot. In general the duties performed by HA(N)s were fundamental patient care tasks and consultation indicated that it was important to ensure the HA(N)s were provided with variety in their daily work, rather than completing or assisting with the same tasks all shift, for example, providing manual handling assistance.

Staff reported that HA(N)s assistance with performing activities of daily living (eg feeding and washing) enabled nursing staff to undertake other clinical duties more efficiently and HA(N) assistance with patient transfers improved nurse’s ability to complete transfers efficiently and safely. Consultation also indicated that HA(N)s may need reminding from time to time about the goals for individual patients and the overarching philosophy of patient enablement and recovery.

There was concern expressed by the ANF that the role definition of HA(N)s may increase as the HA(N)s became more confident in their role and that the scope may also differ between wards. The HA(N) staff interviewed clearly understood their role and felt empowered to communicate this when requested to undertake tasks outside their role.

Efficiency: Key program activities were reviewed in relation to the efficiency of the workforce model. It can be concluded that the workforce model is efficient.



4.3.2 Effectiveness

Effectiveness can be accessed through cost-effectiveness (outcomes compared to inputs) and the indication of future direct impact of a project (benefits as a proportion of costs) where sufficient data and information are available.

Table 9 outlines the key project-specific effectiveness measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 9: Austin Health HA(N) effectiveness measures

Measures of effectiveness	IAF indicators/Austin indicator	Results
Inputs	Pilot program set-up and implementation	\$104,000
Objectives	Short-term objectives	✓✓✓
	Medium-term objectives	✓✓✓
Outcomes	Workforce indicators	
	Enhanced staff competencies	✓✓✓
	Improvements in staff capacity and responsiveness	✓✓
	Increased staff satisfaction	✓✓✓
	A more appropriate workforce profile	✓✓
	Patient indicators	
	Improved patient outcomes	~
Patient satisfaction	Patient complaints decreased from 40 to 21	

Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓

Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Inputs

Pilot program set-up and implementation: As part of the feasibility study conducted prior to undertaking a HA(N) pilot the Austin reviewed other health assistant models in place in Perth, Bendigo, Queensland and the United Kingdom with a particular focus on lessons learned. This enabled the Austin to develop streamlined processes for set up and implementation for the workforce model and pilot program. Processes for the pilot program set-up and implementation were considered by the staff interviewed to be streamlined and very detailed. A project officer was responsible for the oversight of the pilot program. It was estimated that 70% of the work for the pilot set up and implementation was completed prior to the HA(N)s being employed. The aim of this initial ground work was to gain staff buy-in and ensure pilot success.



A comprehensive communication strategy was developed to support the roll-out of the HA(N) pilot program. The Austin leadership team, including the CEO, were very supportive of the workforce model and the pilot. Communication strategies were reported to include: all of hospital staff information sessions (held during daytime and evening hours), weekly updates, key messages and focus groups/interviews with staff. Consultation held during May indicated that there existed a high level of communication with the ward staff prior to the pilot implementation, including the role of the HA(N) on the ward. The importance of communication with future new staff, who may not be aware of the role of the HA(N), was also raised as a key consideration to ensure that they understood the role and the duties performed by HA(N)s.

Communication at all levels across the Austin was generally indicated to be very good. A steering committee was established to monitor the set up and implementation of the pilot program. Individual pilot ward working parties were also established to develop duty lists, monitor implementation. Implementation costs of the pilot program were approximately \$104,000. This includes costs for the following:

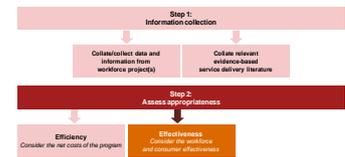
- Salary costs for a project officer to oversee the planning, implementation and evaluation of the project (\$68,000) including:
 - Literature review
 - Conducting focus groups with key stakeholders to determine project potential
 - Developing capacity and capability matrix for existing roles
 - Establish relationship with education provider to explore a specific training program for HA(N)s

The above four activities were undertaken as part of the feasibility study and were separate to the pilot- these are not part of implementation costs for this pilot

- Regular progress report on the pilot program
- Final report on the pilot program.
- Travel costs to conduct site visits (\$6,000) Including:
 - Flights for five people to other states both South Australia and Queensland
 - Accommodation for five people for one night each in South Australia and Queensland
- Administrative costs (\$10,000) including:
 - Advertising
 - Printing materials
 - Workbooks
 - Pagers
 - Communication.
- Other overheads (\$20,000)

Short/medium term objectives: The primary purpose and key performance objective of the HA(N) role was identified in the HA(N) position description:

The HA(N) works as part of the health care team, assisting the registered nurses to provide patient care. The HA(N) is required to practice under the supervision of a registered nurse at all times and care will be delegated in accordance with education level and competence. The objective of this role is to perform patient care activities alongside the registered nurse.



Both the Austin and RMIT indicated that the short-medium term objectives of the HA(N) pilot had been met. Evidence of this achievement is provided through the discussion contained in this section of the report. The objectives of the workforce model have remained the same throughout the pilot project period.

Outcomes – Workforce

Enhanced staff competencies: The competencies in this workforce model are the addition of workforce competencies brought onto the ward by the HA(N) staff. There are no new competencies which the HA(N)s bring into the ward which were not already in place. We have allowed no impact on the evaluation from changes in staff competencies.

Staff capacity and responsiveness: Staff attitude to the introduction of the HA(N)s was measured through focus groups and surveys. The focus groups included approximately 30 nurses across the three wards where HA(N)s were working. Summary comments from the focus groups were:

- *‘the pilot has been a success’*
- *‘we don’t want to lose them as long as they remain in addition to current staffing levels’*
- *‘consultation and training prior to implementation was important’*
- *‘feel valued and that the employer cares’.*

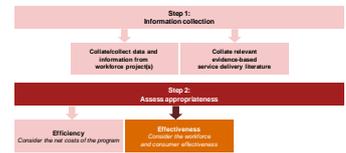
In addition to focus groups two surveys were conducted by the Austin at six and twelve months into the pilot program. The majority of survey respondents were Division 1 female nurses, and all had worked directly with a HA(N). Consultation with the Austin management and nursing staff identified that there was support that the HA(N) pilot project had improved staff satisfaction in terms of completing work, enabling registered nurses to focus on more clinically orientated tasks and improving the overall quality of patient care. In addition there was support that the pilot had assisted to improve access to timely care for patients.

While it is difficult to quantify whether the nursing staff needs and expectations have been met through the HA(N) workforce model, a number of comments obtained through the surveys provide anecdotal evidence to support that this is the case:

- *‘we no longer feel as though we are providing patchwork nursing, we are providing quality patient care’*
- *‘there is an obvious difference in the nursing staff displaying increased morale and decreased stress levels’*
- *‘patients buzzers are not on for as long as they were prior to the HA(N)s joining the team’*
- *‘there has been an increase in patient satisfaction and a decrease in patient complaints’.*

A potential method of quantifying responsiveness is the time between patient buzzer and patient attendance with and without the presence of a HA(N) on staff. The introduction of HA(N)s into a ward should free up some RN time, and increase response rates when patients require nursing attention. Analysis of call response times shows little or no improvement following the introduction of HA(N)s in a ward environment. However it is important to note that the nurse-call data covers all shifts (not just shifts where HA(N)s are present). The HA(N)s comprise only two people on each of the pilot wards and the nurse calls are answered by all staff, potentially washing out any effect.

Increased staff satisfaction: Increased staff satisfaction was reported during the consultation. Anecdotally staff felt happier and more satisfied with their work when HA(N)s were present on a shift compared to when they are rostered on a shift without HA(N) support. Staff were mindful that HA(N) satisfaction was of equal importance and staff were mindful to ensure the HA(N) workload was balanced and HA(N)s were used appropriately.



In addition a staff satisfaction survey was conducted by the Austin and the general feedback was favourable from the nurses surveyed. When asked how the HA(N) has contributed to their general nursing workload, nurses responses included:

- *‘the introduction of the HA(N) role has made a huge difference to my life as a nurse on a busy ward. I no longer have that sense of anxiety and frustration at not being able to provide the proper care and attention that I want my patients to receive. The HA(N)s are absolutely superb. They have really turned this nurse’s world around. To have the extra help on a ward where so many patients are bed bound is a huge bonus’*
- *‘my staff are happier, which means I am happier. There is less stress relating to the feeling that they are unable to provide adequate patient care, and satisfaction in knowing that the ‘little things’ are getting done’*
- *‘as the acuity of patients has increased the introduction of the HA(N) role has meant that the nursing staff feel able to provide the extra and more complex care without compromising some of the peripheral duties that are still necessary but of a lesser priority’*
- *‘the introduction of the HA(N) role has enabled me to better care for the patients as they free up valuable time with things such as feeding patients and helping with hygiene, allowing me more time for other nursing tasks’.*

More appropriate skill mix and workforce profile: A more appropriate workforce profile relates to a better alignment between skill mix and duties required and have flow on benefits of increased staff morale and reduced stress on the existing workforce. The introduction of HA(N)s has allowed RNs the time to be able to provide greater attention and service to their existing patient base.

In a survey by Austin Health, 84% (n=11) of nurses on the pilot wards surveyed agreed that ‘they were able to focus on a higher level of clinical care related to increased levels of patient acuity’. In particular, responses included:

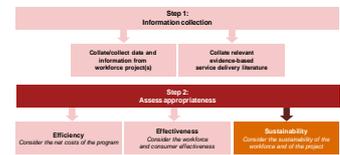
- *‘more time to assess patients and provide more acute care’*
- *‘ability to administrate medication on time’*
- *‘ability to follow up doctors’*
- *‘ability to spend more time with patients, talking, checking vital signs, and providing quality care’.*

Outcomes – Patient

Improved patient outcomes: Quality of patient care can be difficult to measure. The indicators used by the Austin workforce model to identify quality of care were:

- Falls per 1000 bed days
- Pressure ulcers per 1000 bed days
- Patient satisfaction.

Falls and pressure ulcers can be used as an indication of the level of attention or care that a particular patient is given during their acute episode. The rate of falls and pressure ulcers will also fluctuate based on the patient casemix and complexity of a given ward, particularly the average age of patients. The data collected over the period of the pilot program showed no significant changes in the rate of falls or pressure ulcers pre or post-introduction of HA(N)s on any particular ward.



Consultation by PwC revealed that patients, particularly long-stay patients, indicated to nursing staff that they benefit from the one-on-one contact provided by the HA(N)s. Staff reported a decline in patient complaints related to activities of daily living such as ‘their food not being hot’. The importance of assuring a team approach and good team reporting between the nursing staff and the HA(N)s was seen as a fundamental factor in relation to the monitoring of patient activities of daily living and the recording of detailed observations, which can often be undertaken during showering, feeding and transfers.

Patient satisfaction: Anecdotal evidence gathered during consultation indicated that patient satisfaction was positive. Positive patient feedback was demonstrated via a decrease in patient complaints and anecdotal patient comments.

Patient complaints had fallen significantly in the three wards where HA(N)s have been working, from 40 to 21 over the twelve month period. This is almost a 50% fall in complaints, and the reduction has been consistently high between all three wards.

Effectiveness: The measure of effectiveness was based predominantly on the qualitative data collected. The analysis that the workforce model was of moderate to significant benefit when measured by the criteria outlined above and is therefore effective.



4.3.3 Sustainability

Sustainability is the assessment of the new workforce model on workforce and structural stability in the longer-term, including an assessment of known and future risks.

Table 10 outlines the key project-specific sustainability measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 10: Austin Health HA(N) sustainability measures

Measures of sustainability	IAF indicators/Austin indicator	Results
Objectives	Long-term objectives	✓✓✓
Outcomes	Workforce indicators	
	Feasible workforce requirements in the long-term	✓
	Adaptability of the workforce to change in processes/skills	✓✓
	Workforce retention/recruitment	✓✓
	Risks (environmental, political, occupational)	✓✓
	Health workforce profile	✓
	Patient indicators	
	Continuity of care	✓
	Acceptability of future model delivery	✓

Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓
 Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Objectives

Long term: The long term objective of the Austin HA(N) workforce model is to provide support for nursing staff and to provide quality patient care. Processes are in place at the Austin Hospital to further roll out the HA(N) workforce model, comprising a total of 24 new HA(N) positions.

Success of the HA(N) workforce model moving forward will depend upon the mechanisms in place to support sustainability. The executive staff reported that the project management, communications and recruitment strategies for the second wave HA(N) implementation would remain the same as that for the initial pilot. The initial set-up and processes were considered to be well developed and contributed to the workforce model’s success.

It was however, recognised that the pilot of the workforce model was not cost neutral and it was difficult to measure the cost benefits of the HA(N)s, though the intangible benefits of the HA(N)s were many. There would be an ongoing cost associated with the new workforce model if it was to sit above the nursing ratios.

Outcomes – Workforce

Feasible workforce requirements in the long-term: The workforce outcomes we have identified in the previous section are the measurable benefits from the introduction of HA(N)s in each of these wards. In the longer term, it is anticipated that although these benefits will remain, they will be changed from what we observe them to be at the present moment.

Over time, there may be improving efficiencies as HA(N)s become more adept at their tasks and require less supervision and work more independently as part of the ward nursing team.

The satisfaction and increased morale experienced by the nurses due to the introduction of the HA(N)s may diminish over time as they become a part of the standard workforce in the hospital.

Adaptability of the workforce to change in processes/skills: The introduction of the HA(N) workforce model under this pilot scheme has shown the adaptability of the existing Austin workforce in accommodating these additional staff. There is no requirement for the current workforce to change processes or current skills. The introduction of the HA(N) role at the Austin may be seen as a distinguishing feature of the Austin from other peer hospitals. The HA(N) role demonstrates the Austin's investment in its nursing staff, the provision of support for staff and the overall attention to delivering high quality patient care and services.

The HA(N)s in these wards are able to reduce the workload and stress levels on existing EN and RN staff, and this may lead the Austin to become an 'employer of choice'. This may attract greater nursing talent to the Austin, and have flow-on benefits far into the future.

Workforce retention/recruitment: Workforce satisfaction in the longer term should translate into greater retention and lower recruitment costs. If the Austin is seen by the nursing workforce as an 'employer of choice', it may mean that existing staff are more likely to remain, and vacant positions will be more easily filled with experienced and quality staff. These recruitment savings and productivity gains can be significant in the longer term.

The further recruitment of an added 24 HA(N) trainees has been undertaken and the new traineeship will commence as soon as May 2011. The overwhelming response to this role from potential employees indicates that the supply will be maintained to meet the demand.

Risks (environmental, political, occupational): The key risks in the program are related to maintaining a clear delineation of tasks between HA(N)s and nurses. Clear guidelines will assist to ensure that the HA(N)s and nurses respect one another's roles and are able to work together in a cooperative and collaborative way.

Over the longer term, the HA(N)s may choose to leave their role and move into more clinical areas of work. This risk may be managed if the Austin encourages further education, and allows the HA(N)s to move into Division 2 and later Division 1 roles within the hospital, thereby retaining quality staff.

Health workforce profile: The pilot has changed the workforce profile at the Austin Hospital through expanding to include a new role. The new more appropriate workforce profile supports a better match of skills required to complete necessary tasks. A key platform in maintaining the new and positive workforce profile is clear communication of roles and responsibilities both to staff and external stakeholders and clear understanding of how the model relates to existing industrial instruments.

Patient indicators

Continuity of care: The HA(N) role at the Austin is viewed as an improvement in the continuity of care for patients on the pilot wards. Feedback from both staff and patients indicated that the quality of care was of a high standard and attention to the small tasks, that often make a considerable difference to a patient, had increased.

Acceptability of future model delivery: Patient feedback to the Austin indicated the new workforce model has been well received. The new workforce model provided patients on the pilot wards with a greater perceived standard of care, improved patient access to care and enabled more focus on clinical care for patients.

Anecdotal feedback from the Austin patients has supported the new workforce model continuing into the future.

Sustainability: The above commentary provides an assessment of the workforce and structural stability in the longer-term, including an assessment of known and future risks. Based on this information that the workforce model is of moderate benefit and sustainable.

Key findings - Appropriateness

Efficiency

- The educational component of the HA(N) traineeship was reported to be well delivered and provide a good foundation for the work required on the wards.
- The HA(N) workforce model supported the current nursing workforce but did not supplement or replace Enrolled or Registered Nurses.
- There was a marked reduction in the use of specialising hours, with an overall reduction of 362 hours (or 30% over the 12 months of the pilot program).
- A reduction of \$90,000 in agency staff costs was seen across the three wards where HA(N)s were introduced.
- The net cost of the HA(N) program (including training) over the course of the first year equates to \$56,800. However for each year thereafter the benefit of the HA(N) role is \$6,000.

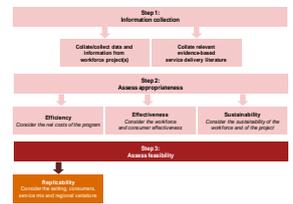
Effectiveness

- Strong executive support and leadership was required for the HA(N) pilot project.
- The Austin had in place a number of processes and systems and a project officer to support the implementation of the HA(N)s including a comprehensive communication plan.
- Nursing staff satisfaction has improved since the implementation of the HA(N) workforce model.
- There was a decrease in patient complaints, from 40 to 21, across all three wards where HA(N)s were working.

Sustainability

- The long term objective of the Austin HA(N) workforce model is to provide support for nursing staff and to provide quality patient care.
- There is a large un tapped potential workforce pool to become HA(N)s.
- The HA(N) workforce model reduces the workload and stress levels on existing EN and RN staff. This may lead the Austin to become an 'employer of choice'.
- Workforce satisfaction in the longer term will translate into greater retention, increased productivity and lower recruitment costs.
- Clear communication of roles and responsibilities (for all positions) to staff and external stakeholders are important to the ongoing success.

Overall appropriateness: Taken together the measures of efficiency, effectiveness and sustainability demonstrate that this workforce model is an appropriate model for consideration in future workforce reform.



Feasibility

The evaluation undertaken was a retrospective review. Determining the feasibility of the HA(N) pilot project was based on the data available from the Austin. In terms of efficiency some quantitative data were available. In terms of effectiveness the majority of data available were qualitative. The evaluation of feasibility was therefore undertaken based on a combination of both qualitative and quantitative data. The feasibility at the local level (the Austin Hospital) has been determined and the pilot is being further rolled out to incorporate an additional 24 HA(N) positions.

4.3.4 Replicability

Replicability is an assessment of a workforce project’s feasibility in terms of replicable settings, the service mix, regional and State variations and the impact on patient.

Settings: In terms of replicability, the new HA(N) workforce model may be applied to most hospital wards across medical, surgical and specialty areas. The HA(N) pilot may be rolled out to any hospital ward that provides the appropriate supervision and support for HA(N) trainees and HA(N)s in their roles.

Patients: The patients that will be impacted by the addition of the HA(N) role will be those on the wards where the HA(N) role is provided to support current nursing staff. As the HA(N) role operates in addition to current staffing the impact on the workforce would be seen to be positive. The HA(N) role is perceived to increase service accessibility, improve patient satisfaction and potentially patient outcomes. The HA(N) enables registered nursing staff to focus on clinical tasks by undertaking duties such as showering, feeding and toileting.

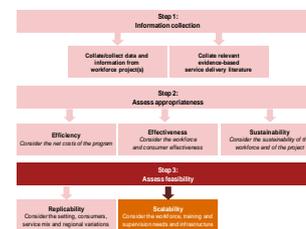
Range and volume of service: The services provided by the HA(N)s are outlined as per the duty list developed and include local variations dependant on the ward where the HA(N)s are operating. The volume of service provided by the HA(N)s is difficult to quantify. Given that the program aim is to provide additional staff resources, there is no minimum volume required for it to be replicable.

Recommendations surrounding variations in the actual role descriptions were raised. To be replicable, the role should have specific inclusions of practice for medical, surgical and specialty wards. However the need for a level of flexibility was noted.

Ongoing costs: We have estimated the costs of replication of the Austin Health’s HA(N) program for the implementation of one HA(N).

These cost estimates are based on the data that were available and used to estimate the cost of the overall Austin Health HA(N) program. As such, a number of assumptions have been generated in order to calculate an estimate of the program costs in metropolitan and regional/rural locations.

The implementation of a HA(N) in a metropolitan hospital is estimated at a net cost of \$39,700 per HA(N) for the first year with costs of \$37,250 to maintain the role in subsequent years of practice. We would expect that the costs per HA(N) implemented in regional areas would only be marginally different.



4.3.5 Scalability

Scalability is an assessment of a workforce models feasibility in terms of the scalability of the workforce, training and supervision needs and necessary infrastructure requirements.

Workforce: The scalability of the HA(N) workforce can be considered flexible as this is an additional position to the existing workforce. The HA(N) role is a position that does not require any pre-existing qualifications and training provided on the job through a traineeship model. As such, there is a broad population base from which potential HA(N)s may be drawn which is supported by the receipt of over 300 applications for the initial six HA(N) roles for the pilot project.

Training and supervision: As the number of HA(N) positions increases there will be an additional requirement for external training and internal organisational supervision and delegation of work duties.

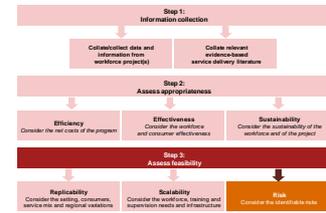
A partnership between the hospital where the HA(N)s are employed and the relevant educational institution is a key element to be considered in terms of scalability. RMIT indicated that the employment of the right teaching workforce was essential to ongoing success and program expansion. Ideally the teaching workforce should have relevant experience with a general health or nursing background, an understanding of where the HA(N) role fits within a hospital and senior staff to guide the teachers through the requirements of curriculum delivery and assessment.

Commitment at the executive level of the hospital was a key element of success in this pilot. This assisted a smooth implementation and ensured that the appropriate supervision structures were in place. Supervision of the HA(N) workforce is of key importance, particularly for scaling up the program. Supervision from both the hospital and the educational institution is required to ensure staff are well trained, competent and undertake work tasks in a manner that is safe for both patients and other staff.

A key issue in the scalability of the HA(N) program relate to the ANF concerns in relation to the HA(N) role. The ANF raised concerns in three areas:

- The perceived addition of unregistered workers to the nursing workforce in Victoria.
- The defined role of practice of the HA(N)s.
- The structures for supervision.

Several meetings between the ANF and the Austin were held in an effort to alleviate these concerns and provide evidence of the processes in place to mitigate unease. The RMIT also commented on initial difficulties at the outset of the pilot, including the acceptance of the new role in Victoria and the industrial issues. However these issues were well managed by the Austin.



4.3.6 Risks

The key area of risk that may impact on the feasibility of wider roll out of the HA(N) workforce model relates to support of the program from external stakeholders.

Stakeholder support: Given the influence of the ANF across the state, exclusive of their support, the sustainability and effectiveness of the Austin pilot and feasibility of other similar programs is at risk. The ANF indicated that they were unclear of the rationale for the implementation of the HA(N) model chosen by the Austin. Unease also related to patient safety and the potential impact on nursing staff across the Victoria.

The ANF also perceived the current HA(N) workforce at the Austin may be considered a transient workforce as HA(N)s decide to continue on with further study and gain qualification as an enrolled nurse or a registered nurse. Whilst this may apply to some HA(N)s, it is our perception from the consultations that some will remain working at an assistant level.

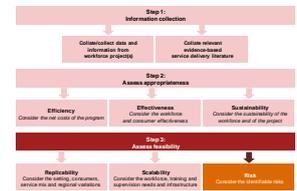
The model preferred by the ANF is the undergraduate model. In this instance student nurses are employed as health assistants. This model has been successfully implemented in Queensland⁵. The advantages of the undergraduate model are identified below:

- Provides an appropriate work opportunity to undergraduates during their studies
- Supplies better prepared undergrads for when they commence the graduate year program
- Enables hospitals the opportunity to further develop links with Universities.

A number of disadvantages of this model however were also noted. Austin Health provided an overview of the reasons for their decision to proceed with the HA(N) model rather than the undergraduate model. These are summarised below:

- Whilst there are significant gaps in the nursing student timetable (weekends and semester breaks) where undergrads may be able to participate in an assistive role, other gaps would be very much based on individual timetables. For example, an undergrad may belong to ‘group 2’ and attend a lab class on a Wednesday morning whereas a fellow student may belong to ‘group 8’ and have to attend the same lab class on a Friday afternoon.
- Rosters would be extremely complex. The inability to provide a consistent roster would also impact on continuity of care for the patient. Variables to take into consideration would include:
 - University schedule – There are also some gaps for particular weeks of a semester but they are not consistent across the year and would not enable flexible or consistent rostering of an assistive role across a year
 - Student individual schedule
 - Student flexibility – A flexible roster could not be offered to the students in an assistive role given the constraints placed on the roster by the students needing to attend university

⁵ Kelly, J. Viewpoint: Partnerships and innovative models for the recruitment and retention of nurses. *Australian Nursing Journal*. Vol 16 No. 6. Dec 08-Jan 09; Catholic Health Care Australia. Response to: National Health workforce Taskforce discussion paper: Health Education and Training, Clinical training governance and organisation; Catholic Health Care Australia. Response to: National Health workforce Taskforce discussion paper: Health Education and Training, Clinical training governance and organisation.



- Ward roster – It is significant to note that when gaps occur in the university timetable they are more likely in the afternoon and this may not be the greatest time of need for the assistive role. Discussions with wards suggests that an assistive role may be best utilised during the morning shift Monday-Friday when the wards is at its busiest
- There would need to be resource made available to assist with maintaining a roster. It would difficult be to alter rosters as required in response to changing ward acuity.
- There is a risk that confusion may occur amongst staff/students as to what duties students are able to perform. The duties that the students could perform in an assistive role would be different to those that they may perform on clinical placement. Blurring of role between being a student versus the employed assistant would undoubtedly prove to be challenging for both the organisation and students.
- Consideration needs to be given to how the undergraduates would be employed. If students were employed on a permanent part time basis certain hours would need to be guaranteed and this may prove to be difficult taking into consideration the above mentioned difficulties with rosters. Casual employment would not provide Austin Health with a stable workforce to guarantee delivery of appropriate services.

Key findings - Feasibility

- A program roll out of 24 new HA(N) positions demonstrates the success and support for the program.
- The HA(N) model may be applied to most hospital wards across medical, surgical and specialty areas where appropriate supervision and training are provided.
- The impact of the HA(N) role on the wider workforce and patients was positive.
- The Undergraduate model, preferred by the ANF, did not meet the needs of Austin Health due to difficulties with rostering, role confusion, and ensuring a stable permanent part-time workforce
- The success of the HA(N) traineeship at other sites would be dependent on the ability of these sites to deliver the traineeship in partnership with educational institutions.
- Strong executive support and communications were considered imperative in the success of this workforce model.
- Employment of the right teaching workforce is of key importance to ongoing success and program expansion.

Feasibility: Based on the information presented in relation to replicability, scalability and risks, the Health Assistant in Nursing workforce model has been developed with a strong foundation and is feasible for broader roll out to other suitable hospitals and wards across the State.

4.4 Recommendations

There is a current demand for replication of the Health Assistant in Nursing role at the Austin Hospital.

The Austin HA(N) program appears efficient, providing cost savings, and effective in achieving its objectives. This workforce model is feasible for wider roll-out with consideration given to the limited support from the ANF. Reflecting on the lessons learned from the Austin pilot and the evaluation findings, key recommendations are made for amendments to the existing workforce model as it continues in its current location. These recommendations should also be considered where the HA(N) workforce model is to be replicated and expanded to other health services.

Key recommendations

External stakeholder engagement

Key stakeholders should be identified and engaged early and throughout the pilot program from development to evaluation. Following the completion of this evaluation there is an opportunity for ongoing dialogue with the ANF and further discussion in relation to the pros and cons of the HA(N) pilot model to allow all members to have an opportunity to comment on the model.

Defined roles and supervision of HA(N)s

A position description for HA(N)s including supervision structures should be confirmed and monitored to identify any variations in practice or supervision.

Training and development

Ongoing training should be provided to support continuing professional development and HA(N) competency.

5 *Lorne Community Hospital – Nurse X-ray project*

5.1 *Overview*

Remote imaging services have been provided by General Practitioners (GPs) at the Lorne Community Hospital (LCH) for over 30 years and GPs continue to undertake X-Rays at LCH.

LCH is located one hour by road from Geelong Hospital / Barwon Health. Barwon Health's medical imaging department, Barwon Medical Imaging (BMI) has supported LCH for many years by providing education and advice to GPs undertaking X-rays. In 2000 BMI was invited to conduct a review which highlighted a number of actions to improve LCH X-ray services which included: basic radiography education to GPs, improvements to darkroom technique and image receptor systems, and a recommendation to replace the 20 year old X-ray unit.

In 2008 BMI provided a further recommendation that LCH replace their X-ray unit and introduce Computerized Radiography (CR) to become part of the Barwon Health PACS solution.

BMI agreed to develop a clinical governance model to support safe X-raying. The advances in technology at LCH, including the immediate direct image transfer to BMI supported opportunities for new ways of working.

In 2008, LCH applied for a grant under the BSBC WIGP (2008-09) strategy to train and obtain licences for four nurses and two allied health professionals from the area in remote X-ray usage in an effort to:

- provide an improved imaging service
- increase access of imaging services to Lorne and associated community to improve patient outcomes
- increase efficiencies of the patient care journey.

Three nurses entered the training and the pilot; no allied health professionals took part. At the time of the evaluation two nurses continue to participate in the program. The pilot and this evaluation pertain to the nurse remote X-Ray service at LCH.

The conditions of the limited use licence granted to remote nurse X-ray operators are that the licence holder must only perform plain radiography of the distal limbs: distal to, but not including, the shoulder girdle and pelvis, except in the case of a medical emergency when imaging of any part of the body may be undertaken. BMI have consistently provided support to remote imaging at LCH to improve the quality of the existing service provided by GPs. Concurrently there was been increased governance and oversight to LCH upon the commencement of the pilot, to improve the quality of the existing service provided by both GPs and nurses.

5.2 Step 1: Information collection

Evaluation was performed by the piloting organisation during and after the completion of the LCH pilot study. The data collected for this evaluation included patient and staff surveys and information from consultations with relevant stakeholders.

Data from the evaluation as well as the evaluation reports and findings were used in the process of evaluating this workforce model using the IAF.

There are a number of key information sources that were reviewed as a component of the evaluation prior to the consultation phase. These included:

- Pilot progress / evaluation reports
- Training guidelines.

Following the consultation a data request was submitted to LCH for additional and more detailed data against the individual IAF indicators, these included:

- Program and training costs
- Salary costs of nursing grade performing x-rays (hourly rate)
- Estimated time spent by staff involved in screening (e.g. 20% of time) during June/July 2010, and January/February 2011
- Costs of running the program including course and ongoing incidental costs
- Cost of the new imaging machine, and other required equipment
- Given life of the Fuji machine used (i.e. number of years until the machine will need to be replaced)
- Change in number of images taken, number of images taken by nurses over the life of the project
- Number of images taken during June/July 2010 and January/February 2011 by nurses versus GPs
- Number of images over the trial taken by nurses that were required to be taken again
- Copies of two quality reports from BMI – a recent report and a report from mid-last year
- Average time spent taking an x-ray
- The cost of retaking an image (salary multiplied by number of images re-taken)
- Evidence of staff satisfaction or staff morale - This may be seen in reduced sick leave, reduced staff-turnover, or general positive staff feedback
- Within the two sample periods (June/July 2010 and January/February 2011):
 - the number of people receiving x-rays that required transfer to Geelong
 - the number that of people were able to be treated in Lorne.



5.3 Step2: Assess appropriateness

5.3.1 Efficiency

The measure of efficiency is looking at the net results after inputs and outputs into the pilot program.

Table 11 outlines the key project-specific efficiency measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 11: Efficiency measures Lorne X-ray pilot

	IAF Indicator	Indicator Relevant to Project	Results
Inputs	Salaries	Salary costs of the program for Nurses. Nurse salary x estimate of time spent taking images	\$2,170
		Alternative medical staff salary x estimate of time spent taking image (325 images at 10min each = 54.17hrs)	-\$4,300
			= -\$2,130
	Training costs, initial and ongoing	Initial training program costs (three nurses)	\$16,850
	Capital costs	Cost of imaging machine, however this was not part of this pilot and not included here	
	Supervision costs	Costs of having all images reviewed by Barwon Health (per year for 160 patients @ \$16.50) Amounts received for images	\$2,640 -\$3,200
			=\$-560
Total Inputs			\$14,160 (first year) and \$2,690 benefit p.a. after
Outputs	Change in staff numbers	Increase in number of staff required as a result of program	None
	Changes in occasions of service	Number of patients who have had images taken by Nurses	Patients; 160
		Number of images taken	Images: 330
Opportunity Cost	Opportunity cost saving	\$31,760	

	IAF Indicator	Indicator Relevant to Project	Results
Total Outputs			160 patients, 330 images \$31,760
Net cost			\$17,600 benefit in Year 1 \$34,450 benefit p.a. after

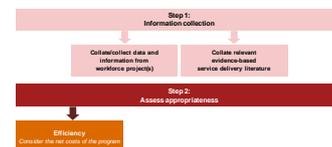
The net benefit of the Lorne X-ray program (including training) over the course of the first year benefit equates to \$17,600. Then for each year thereafter the benefit of the Nurse X-ray program is \$34,450.

Inputs

Salaries are the ongoing cost of producing these images. We have assumed (based on discussion with Lorne nurses) that on average each image takes 10 minutes to prepare. Over a year, an estimated 500 images will be taken at Lorne, with approximately 325 of these being taken by registered nurses. This equates to an average cost of \$2,170 per annum in nursing time being spent on imaging (assuming that nursing wages are \$40 per hour, as advised by LCH).

Training costs are the costs involved in providing the appropriate level of education to licence the nurses within the pilot program. In the absence of an available Victorian course, nurses completed a ten week rural and remote X-ray operator course, at the University of South Australia (UniSA). This course consisted of ten online modules and a two day workshop held at the Adelaide campus (see Appendix D for course outline). Given that there is currently no requirement to have ongoing professional training after obtaining a limited use licence, these training costs are limited to the course fees. The costs of continuous development provided by BMI are considered within the context of supervision.

The basic course is designed to train remote operators to be eligible for licence to use X-ray equipment for limited applications. The conditions of the limited use licence are that the licence holder must only perform plain radiography of the distal limbs distal to but not including the shoulder girdle and pelvis except in the case of a medical emergency when any part of the body may be undertaken. There were costs involved in sending the nursing staff to the two day training workshop in Adelaide for the practical element of the training. At the conclusion of the University course, an additional four days training was provided at Barwon Medical Imaging. This training was provided specifically by BMI for the use of the CR machine being used at Lorne. All these costs are detailed in Table 12.

**Table 12 – Detailed training costs**

Training	Cost Per Nurse	Total Cost
Course Enrolment	\$2,200	\$6,600
Workshop		
Flights	\$600	\$1,800
Accommodation	\$650	\$1,950
Wages (4 days, 3 nurses)	\$325p/day	\$3,900
Training at Barwon Medical Imaging (4 days, 2 nurses)	\$325p/day	\$2,600*
Total Training costs	\$6,050	\$16,850

*Only two nurses completed the training at BMI

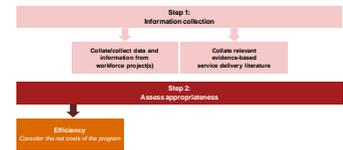
Currently, there is no opportunity for nurses to train in Victoria. A remote and rural X-ray imaging course is run for GPs at Monash University. There is no current intention to have a modified course run for nurses at Monash University although they exist in NSW, WA and SA. It may be assumed that a Victorian based course may improve efficiency of this model, by providing an opportunity to reduce travel and training costs and improve clinical links with local auspices.

Supervision: BMI have been involved in providing supervision and support to staff taking images at LCH over the last 30 years. Continued support including supervision was provided by BMI within the pilot, through several measures:

- Providing ad-hoc training including additional practical sessions at Torquay upon completing the training course and being on call to answer questions when required.
- Reviewing and critiquing images through monthly or bimonthly quality reports issued to LCH for review and discussion at the Multidisciplinary Clinical Services meeting. These formed the basis for the clinical governance framework. Critique is both technical and clinical. Technical critique is received from the clinical educator radiographer and includes commentary on, for example positioning, markers, exposure and radiation safety. Clinical critique is received from radiologists through X-ray reports.
- Linking the PACS system at LCH to BMI so that they can receive images directly enabled remote reporting of images by BMI radiologists. This was a key technological advance supporting a different way of working. In the first 12 months of the pilot, images could not be deleted from the Lorne equipment and therefore further assessment of scans and repeats were completed to ensure safety and quality of imaging practice. Audits are completed every two months to further assess quality and radiation safety.

Consultation revealed that the relationship between BMI and LCH was positive and integral to the ongoing success of image services at LCH both for nurses and GPs. Nursing staff commented that the feedback loop and consistent supervision from BMI provided them with confidence over their work, and allowed for and promoted continuous improvement in a safe and supported environment. BMI commented that increased participation in monitoring image services in LCH has assisted in improving the accountability, transparency and quality of the existing service.

Wider consultation, including with the Radiation Safety Unit in the department and HSU have identified the importance of the ongoing feedback and supervision provided by BMI and the strong and supportive relationship between the remote service and its auspice, for the success of the workforce model.



To make supervision viable BMI charge for their services, being \$16.50 per area X-rayed. In most cases the patient will only require one area to be X-rayed (for example, ankle, hand). However in a small number of cases, there may be multiple injuries or multiple areas requiring X-ray. We have assumed that this only occurs in 5% of cases, based on discussion during consultations. In assessing the efficiency of the pilot, supervision costs are the costs of having the images reviewed and critiqued by Barwon Health radiographer staff. This may also include further ongoing training as quality control.

The ongoing supervision costs for the nursing staff is \$2,640 per annum.

Administrative costs: Administration costs are the costs of administering the program in the longer term. These have been assumed to be zero as there are no costs in addition to salary, training and supervision of given nursing staff currently participating in the program.

The service provided by nurses is not covered under the Medicare Benefits Scheme (MBS). Therefore, to recoup costs, the hospital initially charged \$15 per patient for images taken; this has since been increased to \$20. The amount charged does not fully cover the costs, considering that some patients may have multiple images taken and BMI charge \$16.50 to review each area X-rayed. Consultation with the LCH highlighted that whilst this program was not cost neutral in this respect, as a community service and in terms of opportunity costs to the patient and carer, and benefits to the health system overall, significant benefits are gained through improving accessibility and patient outcomes. Where individuals cannot afford the \$15 cost, Medicare reimbursement services are available in either Torquay or Geelong, meaning that the fee does not reduce or discriminate service availability for the community, but instead provides increased choice.

Outputs

Change in staff numbers: This workforce model was introduced to fill a gap in image service accessibility identified in Lorne. Consultation highlighted that nurses were upskilled to utilise existing staff availability to assist GPs currently completing remote imaging. It was identified that the attributes of the demand for the service, in terms of frequency and time of day, did not make employing a radiographer efficient or feasible with on average less than one X-ray patient being imaged per day, and approximately 33% of images being taken either on weekends or public holidays in peak periods alone.

Given this, the change in staff numbers is assumed to be none as the nurses are existing staff, and no new hires were required. Cost savings are the salary costs that have been saved by using a nurse to perform the service rather than more expensive medical staff, in this case a GP. If we assume that GP costs are \$80 per hour, then the cost saving is \$4,300 per annum.

The cost saving has not been measured in terms of radiographer costs. This is because the pilot was not intended to substitute radiographers, but to meet a service delivery gap by supporting the current service provided by GPs taking images at the LCH.

Changes in occasions of service: Outputs of service are the number of patients who receive an X-ray at Lorne, and numbers of images produced by nurses as a result of the pilot. From the data received by Lorne and BMI, we have assumed that there are approximately 240 patients who received X-rays at Lorne, with approximately 500 X-rays being performed. Approximately, 330 of these were performed by registered nurses at Lorne. However, the proportion of images being produced by RNs has been increasing steadily over recent months.



In total, the outputs into the program are:

- 325 X-ray images being produced per annum
- 160 X-ray patients being attended to by nurses rather than GPs
- Cost savings of over \$4,300 per annum in GP salaries
- Income of \$3,120 per annum being generated in patient fees from X-ray service.

Reduced opportunity costs to patients: The availability of X-ray services at the Lorne clinic means that patients and their carers are in many cases saved the trip to the next closest hospital, Barwon Health, to get an X-Ray. Patients can be diagnosed and treated locally, saving them the trip and associated costs.

In the two months of January and May 2010, there were 75 patients who were X-rayed at LCH for whom we have been able to obtain detailed information on transfer activity. Of these 75 patients, only 10 required transfer or further treatment at larger hospital facility. The provision of the X-ray service at LCH has had a direct impact of reducing travel time to Barwon Health and related opportunity costs for over 85% of presenting X-ray patients. Assuming an average 240* patients a year receive X-ray services at LCH, this can translate to a time-saving of over 400 hours in travel time for residents and visitors to Lorne. This travel time can be converted into monetary terms. If we apply the ABS values for the Average Weekly Earnings of an individual in full time work this equates to \$32.50 per hour. 400 hours travel equates to \$13,400. In addition to this cost, travel costs are also incurred. Travel costs are calculated based on 204 trips at \$90 per trip (60 cents per kilometre) equating to \$18,360. The overall costs savings to patients is therefore \$31,760. In addition, managing the problem locally reduced the burden on the busy Emergency Department at Barwon.

Efficiency: Based on the total inputs and outputs the model is efficient with a small net cost in the first years and overall cost benefits in subsequent years.

5.3.2 Effectiveness

Table 13 outlines the key project-specific effectiveness measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 13: Lorne Community Hospital – Nurse X-ray project effectiveness measures

Measures of effectiveness	IAF indicators/LCH indicator	Results
Objectives	Short-term objectives	✓✓
	Medium-term objectives	✓✓
Outcomes	Workforce indicators	
	Enhanced staff competencies	✓✓✓
	Improvements in staff capacity and responsiveness	✓✓✓
	Increased staff satisfaction	✓✓✓

Measures of effectiveness	IAF indicators/LCH indicator	Results
	A more appropriate workforce profile	✓✓✓
	Team impacts	✓✓
	Knock on impacts to carers	✓✓
Patient indicators		
	Patient satisfaction	✓✓✓

Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓
 Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Effectiveness can be measured in terms of staff effectiveness and patient effectiveness. The outcomes of the workforce model for each are varied and valuable.

Objectives

Within the planning stages of the pilot, specific measurable and timely objectives were not set. The project plan articulates the following short-medium term objectives for the pilot:

- To develop a model of remote X-ray usage by nurses, including application for DH remote X-ray licence.
- To develop a clinical governance framework to support safe X-raying including: clinical guidelines, clinical audits and review of a random selection of X-rays.
- To develop robust referral, remote diagnostic and quality processes.
- To evaluate the impact of the model in addressing a determined community need.

Discussion with key stakeholders, particularly those at the LCH have recognised the need for key measurable and achievable objectives to be set in the project planning phase. This then enables appropriate baseline data to be gathered to support the evaluation of the workforce model.

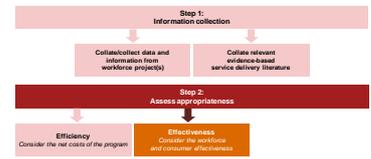
From consultations held, the following short and medium term objectives were identified for the pilot in conjunction and addition to those outlined in the project plan.

The short term objectives of the workforce model were to meet the local demand for X-ray services in Lorne, reducing the need for patient referral to Barwon Health. It was assumed that access to local services will provide more timely access to services, and should reduce the need for patients to travel to Barwon Health if the injury can be treated locally.

The medium term objectives of the program were to develop a:

- model of remote X-ray usage by nurses, including application for DH remote X-ray licence
- clinical governance framework to support safe X-raying including clinical guidelines, clinical audits, and review of a random selection of X-rays.

This workforce model intended to improve the level of health services available for residents and seasonal visitors to Lorne, and provide greater satisfaction to existing rural nursing staff.



Outcomes – Workforce indicators

Enhanced staff competencies: The nurses participating in the pilot program successfully completed the qualifications to hold a limited X-ray licence within Victoria under the Radiation Act 2005. They received ongoing support and supervision from staff at BMI, which was identified to have improved the quality of the images being produced over the period of the pilot.

Improvements in staff capacity and responsiveness: The licensing of nurses to be able to perform limited X-rays has reduced the need for GPs to be producing these. This has reduced the demand on GP time and improved the accessibility and quality of the service to the community.

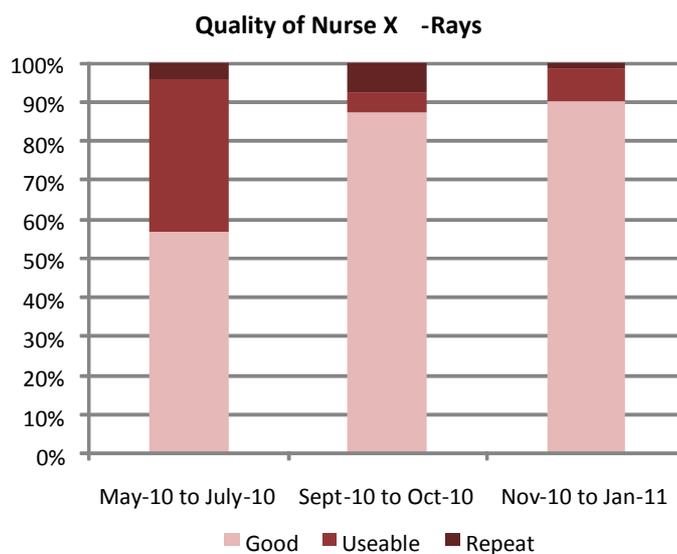
The quality of the X-rays being produced at LCH increased over the period of the pilot, with a marked improvement in the quality of the X-rays produced by nurses. The X-rays taken by nurses have been of sufficient quality to support effective triage and appropriate patient management locally.

Data provided by BMI and LCH enabled the quality of nurse X-rays to be established and monitored. For each patient, the number of X-rays taken is determined by the type of injury or suspected break. In order to obtain a clear picture of the break, sometimes several images are required to be taken. On average, 2.3 images were required for each patient receiving X-ray imaging services at LCH. The quality of the images taken were categorised by BMI into ‘Good’, ‘Useable’ and ‘Repeat’.

- Good – The image is of good quality
- Useable – The image is still able to be diagnostic, however small hygiene issues such as markers and minor exposure issues remain
- Repeat – The image is still able to be of triage quality, but would be considered a ‘repeat’ quality by radiographers.

The quality of the X-rays being produced at the LCH by nurses steadily improved over the period of the pilot. The percentage of Good, Useable and Repeat images are shown in the graph below.

Figure 2: Quality of nurse X-rays at Lorne





Over the duration of the pilot, the rate of ‘repeat’ quality images at LCH was 3% for those images being taken by nursing staff. This is comparable with the expected ‘repeat’ rates at standard hospitals with radiographers. A rate of 10% is expected for hospitals with busy emergency departments, and 5% for generalist hospitals where there are less time pressures and demands and patients may be positioned more easily. Based on this repeat rate, the quality of X-ray images being produced by the nurses at Lorne is appropriate in supporting the initial management decisions in a triage context.

Increased staff satisfaction: Nurses who participated in the pilot program have expressed satisfaction in their role, and enjoyed the opportunity to learn and undertake X-raying patients. This finding was based on primary research undertaken through the consultation process held with LCH.

A more appropriate workforce profile: The transfer of duties from GPs to nurses within the LCH had only a minor impact on staff salary costs. However, this workforce model provides greater benefits to both GP and nursing staff, as this allows greater workforce flexibility and substitution between staff when there are shortages, where GPs are not available on weekends (where locums without X-ray licences often cover) or due to time pressures on the medical practice.

Team impacts: The use of nurses in X-raying has had the potential to increase the workload of other nurses. This is due to other nurses having to cover patient load and other tasks whilst nurses are imaging. However, in the pilot, the impact was minimal. This is primarily due to the size of the LCH and that senior nurses with limited patient loads hold licences. Also, it has been recognised that those nurses within the pilot were particularly passionate about the pilot and their role, and worked diligently to reduce the impact of the imaging service on the wider team.

Negative impacts on the team may present where either the demand for nursing images occurs at LCH and additional licences are not obtained or the mix of licence holders changes significantly. This should be considered in moving forward with the workforce model.

Opportunity outcomes to carers: The impacts of this workforce model are the reduction in opportunity costs related to travel for carers to other major hospital centres.

Outcomes – Patient indicators

Patient satisfaction: Feedback was obtained from patients regarding the X-ray service at the LCH. 40 clients were telephoned and asked to comment on the service. All the feedback was positive, with the key emerging themes being:

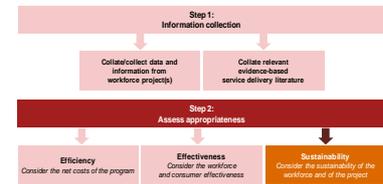
- *Being able to be treated locally and remaining on their holiday, or close to home.*
- *Saving the trip back to Melbourne or Geelong hospital facility.*
- *Lucky to have the service, and that the nurse could perform the procedure when the doctors were busy.*

This service has been generally considered an asset to the community of Lorne, with there being significant local community support around the X-ray project. As an example, the training of one of the nurses was fully funded by the local-op shop.

Improved patient outcomes: The key patient outcome from this workforce model is the availability of localised care, and more efficient diagnosis of injury. As mentioned in the previous section on carer outcomes, over 85% of patients requiring X-ray services at Lorne are not required to make the further trip to Barwon Health. The same time saving can be applied here as \$8,000 per annum in utility. There is also the additional benefit of reduced pain for the duration of travel to Barwon Health.

For those patients who are required to make the trip to Barwon Health, the Lorne X-ray service provides them with diagnostic quality images which can be used immediately upon presentation, and waiting times at Barwon Health are also reduced.

Effectiveness: The measure of effectiveness was based primarily on the qualitative data collected. The analysis shows that the workforce model was of significant benefit to the Lorne community and hospital and therefore effective in its purpose.



5.3.3 Sustainability

Sustainability is the assessment of workforce and structural stability in the longer-term, including an assessment of known and future risks.

Table 14 outlines the key project-specific sustainability measures and indicators. For each project-specific indicator the results have been included. Following the table is the rationale behind each of the results.

Table 14: Lorne Community Hospital – Nurse X-ray project sustainability measures

	IAF Indicator	Results
Objectives	Long term objectives	✓
Outcomes	Workforce indicators (supply)	
	Feasible workforce requirements in the long-term	✓✓
	Adaptability of the workforce to change in processes/skills	✓✓✓
	Workforce retention/recruitment	~
	Risks (Environmental, political, Occupational)	××
	Health workforce profile	~
	Patient indicators	
	Continuity of care	✓✓
	Acceptability of future model delivery	✓✓
	Future need for service	✓

Key: Significant benefit – ✓✓✓, Moderate benefit- ✓✓, Minimal benefit – ✓
 Neutral – ~, Minimal cost – ×, Moderate cost – ××, Significant cost – ×××

Objectives – Long term

The long term objective of the workforce model is to meet the service demands of the community through providing accessible imaging services to assist in the triage process and to improve patient outcomes.

Sustainability of the program going forward relies particularly on several areas:

- Continued support from BMI**
 BMI have been integral in providing feedback, quality assurance, guidance and ongoing development to LCH. Without their involvement and auspice role potential risks may present surrounding patient safety and image quality. However given that BMI has a professional interest to remain involved in the program to ensure a safe radiographic practice (see ‘Risks’ section below), they are currently in support and have supported remote X-rays services in Lorne in the past, there is a low risk of them failing to support the program in the future.



- *Funding*

In Lorne, funding for the pilot has been expended. Given the support from the community, local groups have fundraised to support the additional training of nurses. This may be unsustainable in the future. Whilst no capital purchases have occurred or staff have been hired, financing for training, maintenance and BMI services may require further funding in the future.

- *External stakeholders*

Limited support currently exists for the program from the HSU and their members and they have potential to affect the sustainability of program.

Workforce indicators

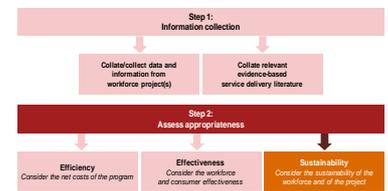
Feasible workforce requirements in the long-term: It was identified that other nursing staff were keen to participate in the program, highlighting that the potential workforce exists in continuing this workforce model in the future. A sustainable model and role of nursing staff holding licences should be investigated. Taking images could be a part of their role, as opposed to currently being in addition to the role.

Adaptability of the workforce to change in processes/skills: Limited opportunity costs present as nurses completed scans in addition to their current roles. In part, this is achievable as senior nursing staff that hold potential to have a reduced patient load and increased flexibility in their day, were selected for the pilot. It has been identified through consultation that during occasional busy periods, additional workloads have fallen on the existing nursing staff which in turn has led to some dissatisfaction.

Workforce retention/recruitment: A key objective, noted as a retention strategy, was to improve satisfaction of rural nurses. This workforce model involving the up-skilling of nursing staff to take X-rays has not necessarily led to an improvement in the retention of nurses at LCH. Given the limited number of participants in the pilot, conclusions over the impact of it on nursing retention are difficult to reach. Recruitment of staff to LCH is contingent on factors beyond workforce up-skilling including location, spousal circumstances, ward type and size and the hospital need for staff.

Risks: Several risks present in terms of the sustainability of the program going forward. These predominantly surround the ongoing support and involvement of BMI in the program, acceptance and buy-in of external stakeholders, and the overarching clinical governance frameworks supporting the workforce model.

Health workforce profile: The pilot has seen role extensions in nursing staff, expanding their skill set to include image taking. As nurses are performing this service to fill an existing service gap in the community, it has not changed the health workforce profile in Lorne, and would not be expected to change it in the future. Whilst additional nurses may receive training in the future, if the demand for the services increases it may become more feasible to employ a radiographer if demand reaches a particular level. Attracting and retaining a radiographer is a further consideration. In this case, nurses may continue to assist in filling gaps in services where radiographers are unavailable to complete imaging.



Patient indicators

Based on the findings from the consultation process, the patient care journey has been improved through:

- higher quality of the images produced by LCH significantly reducing the need for repeat X-rays when patient reaches Barwon Health
- electronic transmission of all images produced at LCH to BMI ensuring that images are systematically available for reporting by a radiologist and for further clinical decision making
- prevent unnecessary travel for X-ray patients.

Acceptability of future model delivery: Patient and community feedback obtained by LCH indicates the service has been well received. The workforce model provides the community with more timely access to images and did not prevent alternate options being available ie through GP imaging or attending Torquay or Geelong services.

Anecdotal feedback from the Lorne community has supported this workforce model continuing into the future.

Future need for service: Lorne has been a long standing popular tourist destination in Victoria based on the Great Ocean Road and hosts a number of major events, for example the ‘Pier to Pub’. A demand for imaging services is expected to continue to remain going forward particularly given the expected increase in tourist and resident population numbers in Lorne and the significant increases in travel times to Geelong experienced during peak season.

The service need for a remote nurse X-Ray model at LCH may alter if:

- the demand for radiography services is high enough to sustain the employment of a radiographer in the region
- the Torquay service operates after hours which would provide a service within one hour of Lorne.

In these situations it would be recommended that the remote nurse X-Ray model at LCH provides services only where the radiographer is not able to attend to a patient.

Sustainability: The above commentary provides an assessment of the workforce and structural stability in the longer-term, including an assessment of known and future risks. The workforce model is beneficial and sustainable with the implementation of appropriate risk management strategies.

Key findings- Appropriateness

Efficiency

- In the first year of implementation, there is a net benefit of \$17,600 per annum from the program
- The ongoing net efficiency of the program is \$34,450 per annum
- In the absence of an available Victorian course, nurses completed a 10 week rural and remote X-ray operator course, at the University of South Australia (UniSA).
- Approximately 330 of 500 X-rays performed at Lorne were performed by registered nurses with the proportion of images being produced by RNs increasing steadily over recent months.

Effectiveness

- All images taken by nurses were of sufficient quality allowing effective triage and appropriate patient

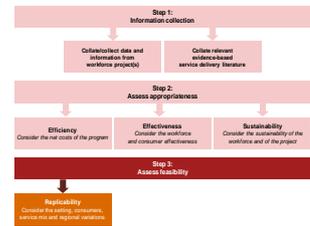
management decisions to be made

- Staff within the LCH are supportive of the new workforce model and there has been minimal impact of nurses completing X-rays on the wider nursing staff.
- There has been a significant economic benefit to patients from the new workforce model. Travel to Geelong for imaging services has been reduced for over 85% of presenting X-ray patients at the LCH.

Sustainability

- Sustainability of the workforce model relies on continued auspice and support from BMI, a sustainable funding model and acceptance by external stakeholders, in particular from the HSU, ANF and their respective members.
- The new workforce model improved staff satisfaction and has continued support.
- There was no significant impact on the retention or recruitment of nursing staff over duration of the pilot.
- There have been no significant changes to the existing workforce profile as a result of the new workforce model. The limited service demand meant nurses completed imaging along with other daily tasks.
- If service demand increases significantly attention should be given to structuring the workload of existing nursing staff to promote the long term sustainability of the new workforce model.
- There is positive patient and community support for the new workforce model.
- The demand for the remote nurse X-Ray service is expected to increase in the future given demographic projections

Appropriateness: Taken together the measures of efficiency, effectiveness and sustainability demonstrate that this Nurse X-ray workforce model is an appropriate model for consideration in future workforce reform.



5.4 Step 3: Assess feasibility

The evaluation undertaken was a retrospective review. Determining the feasibility of the Nurse X-ray pilot project was based on the data available from LCH. In terms of efficiency some quantitative data were available. In terms of effectiveness the majority of data available were qualitative. The evaluation of feasibility was therefore undertaken based on a combination of both qualitative and quantitative data. At LCH, the program has been deemed successful and valuable, seeing that further education positions for two nurses have been sponsored by community organisations.

5.4.1 Replicability

Replicability is an assessment of a workforce project’s feasibility in terms of replicable settings, the service mix, regional and State variations and the impact on patient.

Stakeholders indicated that the successful implementation of this program within other locations requires:

- careful selection of the location through an established and thorough business case addressing apparent needs and demand for the service within the remote area
- a strong relationship with an auspicing radiography service
- buy-in from key stakeholders throughout the establishment and implementation of the program.

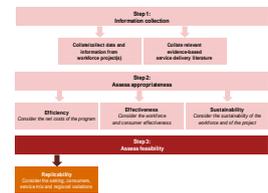
Feedback from the LCH pilot highlighted that upfront planning was limited. Although a project plan was created and submission documents were developed for the purposes of gaining grant funding, improvements could be made in project planning including the development and documentation of frameworks in advance to support the program in the initial stages.

Stakeholders identified that replicability of the workforce model would be enhanced if appropriate frameworks are developed in advance surrounding:

- site selection
- program objectives
- governance and relationships with an auspice organisation
- monitoring and evaluation
- timelines.

Settings: The key issue identified by stakeholders in replicating a remote nurse X-Ray service is determining the need for the service in a particular location. Evaluating the LCH pilot has highlighted key issues to be considered when establishing and implementing a nurse X-Ray service:

- agreeing the service gap
- intersection with existing or potential radiographer services to fill service gaps
- economic benefits to the patient, community and health system.



Agreeing the service gap: Agreeing what is deemed a service gap is a key factor in the program being accepted by the wider stakeholder group, including union groups and other professional members.

LCH is based in Lorne, a seaside town with approximately 1,000 permanent residents. Being based approximately 67km by road from the emergency imaging service in Geelong, and 47km to a service in Torquay, contention exists as to whether Lorne is deemed a remote location for the purposes of issuing remote X-ray licences.

As a tourist location, it is recognised that the population in Lorne swells during traditional holiday periods. For example, in May 2010, 24 images were taken at the LCH, compared to the popular summer month of January when 95 images were taken as tourists also utilise the service. During summer periods access to the next available services in Torquay and Geelong via the Great Ocean Road is reduced due to increased tourist congestion. In this instance it could take over two hours for individuals to access appropriate care.

The key elements establishing Lorne as a site for a remote x-ray operator service were that:

- *A significant portion of images are taken after hours*
Whilst an imaging service operates in Torquay, it is available only during business hours. Using January, 2011 as an example, over 47% of images taken in LCH were completed on weekends or public holidays alone where services in Torquay would not have been available. This does not consider the number after hours.
- *The closest emergency service takes over one hour to access*
Alternate after hour access to imaging services requires travelling to Geelong. Whilst less than 100km away, commuting during non-peak periods takes over one hour.

Intersection with existing or potential radiographer services to fill service gaps: The HSU and its members raised concern that remote nurse X-ray services may erode demand for radiographers as cheaper alternatives are found. It was highlighted that potential existed for radiographers to travel to, or be based in Lorne during peak periods to service imaging demands.

However, over the last two summer periods there has been an average of 1.5 patients using the service per day in Lorne (39 in January 2011, 55 in January 2010) and 47-48% of patients utilise the service after hours, therefore it is not feasible or the best use of resources to have a radiographer based in Lorne during peak periods. In addition, recruiting and retaining radiographers in small rural centres is problematic.

With low patient numbers utilising the service, surrounding radiographers in other regions should not be materially impacted upon.

Models in other Australian jurisdictions where remote X-ray licences are issued to alternate health professionals variably include restrictions on when licences can be issued and the conditions under which they can be used and maintained. Western Australia has a well developed model of remote X-ray operators with clear guidelines and governance arrangements and New South Wales has under the Radiation Control Act 1990, developed a framework with stakeholders that licences can only be issued where radiographers are not in attendance, and are not able to attend as outlined in Figure 3.

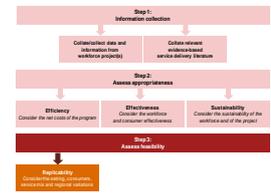


Figure 3: NSW Criteria for issuing remote X-ray licences under the ‘radiographer not able to attend’ criteria

A radiographer is unable to attend because the radiographer has:

- has declared that they are unavailable
- is not rostered on-call, or is on leave
- is required by Occupational Health and Safety not to attend to normal duties, eg workers compensation
- is not contactable
- is unable to attend in a timely manner due to restrictions in distance/time in emergency situations.

NSW also requires documentation that the radiographer is unable to attend by demonstrating the following (see Figure 4 below):

Figure 4: Assessment to establish the need for a remote X-ray licence from an allied health professional

A radiographer is unable to attend because the radiographer has:

- a comprehensive assessment has been undertaken of the need for on-call arrangements which has verified that an on-call roster is not required
- all attempts to recruit radiographers have been undertaken prior to utilisation of a remote radiography operator to cover radiographer leave for a period of five working days. This includes documentation that labour market testing has been undertaken and at least one locum agency has been approached
- all attempts to contact the radiographer are documented and follow a clear protocol based upon the Area Health policies and/or individual hospital policies, with clear delegation of authority
- an assessment was undertaken of the distance/time issue.

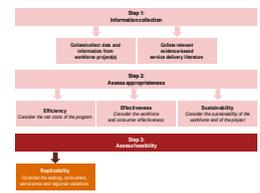
Given that the impact on existing or potential services provided by radiographers is a sensitive stakeholder issue, it is recommended that establishing appropriate criteria for agreeing service gaps and issuing remote X-ray licences be considered in light of those used within other states to the degree that they are applicable to the Victorian context. This may assist the replicability of the remote nurse X-Ray service model in other Victorian locations.

Patients

Patients impacted by the program will be those in remote communities. A service of this type should increase service accessibility and improve patient outcomes by supporting effective triage, and where possible, providing treatment and care locally within the community.

Range of service: The services provided by nurses included extremity (limb) X-ray images as outlined by the conditions of the remote licencing requirements. The licence also identifies some flexibility with associated guidance to provide for emergency situations where it has been assessed that, in the best interests of the patient, other images are taken (eg urgent chest X-rays on compromised aged patients).

Staff consulted at the LCH highlighted the importance of creating specific clinical protocols and guidelines including roles and responsibilities in advance of the remote nurse X-Ray model being implemented. For the service to be replicable it is recommended that such protocols and guidelines are in place prior to implementation.



Lorne Community Hospital – Nurse X-ray project

Volume of service: Since the implementation of the remote nurse X-Ray service at LCH approximately 700 images have been completed at LCH, of which, approximately 450 images were taken by nurses.

Given that the program aim is to fill an existing gap in services within the community, there is no minimum volume required for it to be replicable. There is only a small net loss to the program, which reduces as more images are taken. However in replicating the services, thresholds should be considered in advance over which it would be considered feasible to employ a radiographer. With the introduction of any remote nursing X-ray program the business case should explore the costs and benefits of both radiographers and nursing staff undertaking X-rays and a determination of the most appropriate model made based on this information.

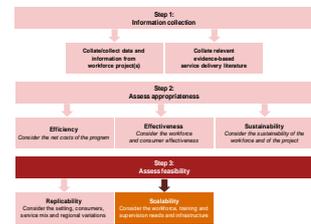
Ongoing costs: We have estimated the costs of replication of the Lorne remote nurse X-ray service for the implementation of one nurse.

These cost estimates are based on the data that were available and used to estimate the cost of the overall Lorne Nurse X-ray pilot workforce model. As such, a number of assumptions have been generated in order to calculate an estimate of the costs in regional/rural locations.

The implementation of one remote nurse operator in a rural hospital is estimated at a net cost of \$4,708 per nurse in the first year. This cost is exclusive of capital costs. We would expect that the costs for implementation per nurse in other regional or rural hospitals would only be marginally different.

Capital Costs: Are the costs of the imaging machinery, which was \$160,000. No additional machines or further upgrades to the machine are expected, and repairs and maintenance costs are assumed to be captured in the initial capital costs within warranty. This cost is outside the scope of this program, however it is noted that the X-ray machine needs to be in place for this program to be feasible.

Net Cost: In the first year of implementation, the net benefits of running the X-ray service is \$45,860 per annum. Of this benefit, \$14,100 are direct benefits to the GP practice, and \$31,760 is indirect benefits to the patient and carer. In ongoing years, this benefit reduces to \$34,460 per annum. This ongoing benefit makes the assumption that a new nurse is required to complete the full training course every 5 years.



5.4.2 Scalability

Scalability is an assessment of a workforce project’s feasibility in terms of the scalability of the workforce, training and supervision needs and necessary infrastructure requirements.

Workforce: Scalability of the workforce is flexible; additional remote X-ray licences held by nurses at LCH would reduce the reliance on a limited number of staff to be available at all times to meet service demands, but would not be expected to increase the demand for infrastructure or additional machines.

Training was provided to nurses through the ‘rural and remote X-ray operator course’ run by the University of South Australia due to the lack of similar courses accepting nurses in Victoria. Cost of the training was \$7,350 per nurse. As the grant funding ended, funding for additional training was supported by Lorne community organisations.

Training was delivered over a ten week period incorporating online modules as well as a two day workshop at the Adelaide campus. Assessment included online tests, clinical competency worksheets and an image critique film examination. Given the level of quality demonstrated the training appears to be sufficient for its given purpose.

Training was seen to have minimal impact on the wider nursing staff given the low number of participants in the pilot workforce model, as well as the focus on on-line training. As nursing staff in the pilot highlighted the importance of peer support, ideally, a balance should be provided between training nurses with peers when considering scaling up this model..

Monash University, as the sole provider of remote X-ray operator courses in Victoria, were not supportive of allowing nurses to participate in the course, unless they were Nurse Practitioners. This is due to the course offered currently assuming a level of medical knowledge and containing advanced content including the evaluation of image results and resolving poor image quality.

Whilst a local course may have a potential to reduce costs and strengthen training specific to the need of Victoria, the Radiation Safety Unit and other stakeholders have not highlighted that having a Victorian training course is important to the success of the program.

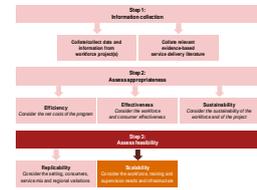
Supervision: It has been highlighted that the availability of ongoing supervision and governance from an auspice organisation was imperative to ensuring quality and safety in service provision and the success of the program by all key stakeholders including the nurse participants, LCH, the Radiation Safety Unit, BMI, and union bodies. Scalability of the workforce model requires the establishment of governance arrangements to monitor the quality and safety of the service. A strong relationship in which ad-hoc support and supervision is available was also recognised as important for the program to be successful.

The current licence held by nurses does not require ongoing training and development following the initial upskilling process. Several stakeholders suggested that ideally, to advance best practice, nurses should be involved in some form of continuous development whether this is run by the associated auspice, an educational provider, or the Radiation Safety Unit.

Infrastructure (buildings and equipment): Is not formally a component of this evaluation. The following discussion is provided by way of background information only and has been determined through information provided by LCH.

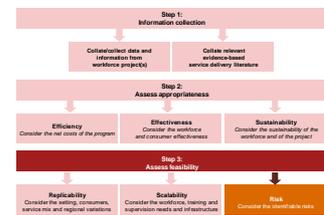
Currently the LCH utilises a GE AMX4 Plus and Fuji CR/PACS machine and systems. It is not assessed by LCH that any additional infrastructure is required for the service as existing demand appears to be appropriately met through the use of one machine.

Lorne Community Hospital – Nurse X-ray project



Infrastructure demands would exist in other services where imaging services are either not currently provided, or are provided in isolation to other auspices. Where services are operating in isolation, given the necessity of governance and monitoring frameworks with auspice bodies, additional infrastructure may be required to facilitate feedback and quality assurance so that machines are compatible and allow data sharing.

Appropriate infrastructure has been highlighted within the consultations, particularly with BMI, as being imperative to the success of the pilot. The feedback loop was identified as being key to the Lorne pilot, and therefore, compatible radiography machines and systems between the pilot service and its associated auspice were considered necessary by the stakeholders interviewed.



5.4.3 Risks

These are the identifiable risks for the remote nurse X-ray workforce model if broader roll out is considered.

Three key areas of risk were identified that may impact on the feasibility of wider implementation of the remote nurse X-ray model. These relate to the key indicators of success, being:

- Acceptance of the model by external stakeholders
- Development of a governance framework
- Appropriate relationships with associated auspices to provide necessary support and quality feedback.

There was limited support from the HSU and their members for the remote nurse X-ray workforce model piloted at LCH. This may have been improved through greater engagement and involvement in the pilot. Concerns raised surround the appropriateness of the pilot in its rationale, duration, assessment, evaluation and clinical frameworks and patient safety as well as the potential impact on existing radiographer services. Radiation safety issues were monitored by the Radiation Safety Unit and BMI and there were zero radiation issues requiring further consideration. However, given the influence of these groups the sustainability and effectiveness of the Lorne pilot and feasibility of other similar programs is at risk without their support.

The feasibility of implementing new workforce models is increased when all key stakeholders are engaged and supportive up front. Ongoing engagement and consultation in the establishment of remote nurse X-ray workforce models may improve buy-in and support going forward.

Development of a governance framework: The success of the remote nurse X-ray model is contingent on a strong governance framework that is specific, appropriate and individualised to the service containing clear protocols and clinical guidelines that provides:

- Clear lines of responsibility and accountability
- Defined scope of practice and role definition
- Quality assurance processes including feedback loops.

Auspice relationship and support: The relationship between BMI and LCH was held to be imperative to the success of the program in providing an important feedback loop surrounding image quality.

The feasibility of the remote nurse X-ray workforce is dependent on establishing a relationship between an auspice imaging service and the remote nurse X-ray workforce. Although licensing through the Radiation Safety Unit does not require nurses taking images to be associated with an auspice, the feasibility of wider implementation of the model requires that this relationship be in place.

This risk could be mitigated through a mandatory requirement for an auspice to be attached to a program where nurses provide remote X-ray services. Whilst some risk will still exist in terms of the effectiveness of this relationship, a link to a larger specialised service should support improved quality and patient outcomes.

Key findings – Feasibility

- Additional staff holding licences may reduce workload of existing nursing staff participating in the program.
- Given the lack of interest of existing ‘rural and remote X-ray’ training providers, limited opportunity currently exists for training to be held in Victoria.
- Currently there are no requirements for practical or ongoing training or development within the pilot, or further, for those holding remote X-ray limited licences within Victoria.
- Ongoing supervision and a positive auspice relationship were highlighted as being imperative to the success of the Lorne pilot.
- No current infrastructure demands exist for Lorne. However it was recognised that compatibility of infrastructure between the pilot service and its associated auspice was integral to the success of a pilot.
- Risks on scalability of the program surround stakeholder support, the development of a governance framework and a positive auspice relationship.

Feasibility: The workforce model has been developed with a strong foundation and is feasible for broader roll out to other hospitals with similar demand and geographic challenges as Lorne.

5.5 Recommendations

Given the current and expected further demand for the service, a need exists for the remote nurse X-Ray model in Lorne.

As the program appears efficient, providing cost savings, and effective in achieving its objectives, we recommend that the program continue in Lorne with consideration given to the following recommendations.

Reflecting on the workforce model at Lorne and the evaluation findings, key recommendations are made for amendments to the existing model as it continues in its current location and for consideration as the model is replicated and expanded to other appropriate health services.

Key recommendations

Business case	<ul style="list-style-type: none"> • A business case should be established identifying the program rationale, objectives, and clinical governance and evaluation frameworks.
Stakeholder engagement	<ul style="list-style-type: none"> • Key stakeholders should be identified and engaged throughout the establishment and implementation of the model
Auspice	<ul style="list-style-type: none"> • Locations selected for a pilot should have a demonstrated relationship with auspice body, or identification of a proposed auspice and an outlined plan to develop relationship • Auspices should be contracted to provide oversight governance services in the form of training and development, timely ongoing quality clinical and technical reports • Imaging machines and PACS should be connected to the auspice with a feedback loop provided.
Governance frameworks	<ul style="list-style-type: none"> • Governance frameworks should be established prior to the commencement of the program and be trialled and formalised throughout the implementation.
Training and development	<ul style="list-style-type: none"> • Ongoing training should be provided to support professional development • Opportunities should be explored with Victorian educational facilities to have appropriate nursing rural and remote X-ray courses.
Defining of roles	<ul style="list-style-type: none"> • Definitions of the roles and responsibilities for nurses holding a limited use license should be established based on the limited license criteria which form the basis for which X-rays are taken, together with supporting guidelines, resources and conditions for when a nurse may hold such a license. • Establish appropriate criteria for consideration surrounding when a nurse may hold a limited licence, ie what is classified as a service gap for a remote service and the appropriateness of nurses taking images where radiographers are available.
Infrastructure	<ul style="list-style-type: none"> • Where possible, compatible radiography machines and systems between the auspice and pilot service should be installed.

6 *Lessons learned*

Following the conclusion of the qualitative and quantitative data analysis as presented in the body of this report, several lessons were identified. The lessons learned for the three individual programs are discussed below and grouped under the relevant workforce model. A number of lessons are common across the three workforce models and these should be considered when implementing new workforce models.

6.1 *Bendigo Health*

Communication and stakeholder engagement

An effective communication strategy and plan are used to address the needs of the stakeholders, for communication between stakeholders, supporting the overall implementation and change management strategies.

The implementation of initial communications should be structured and occur on a timely basis to achieve maximum buy-in from program participants. Following this period, ongoing communication with all internal and external stakeholders should occur on a regular basis and be tailored to meet the specific requirements of individual groups.

Due to industrial issues there were some delays in communication with staff at Bendigo Health and this resulted in a lack of clarity and consistency in the information provided in relation to the HSA pilot. This may have impacted the nursing staff and HSAs initial understanding of the role and expectations. Nursing staff commented, both in consultation as part of this evaluation as well as in the surveys, that this was an essential process that was not effectively addressed as part of the pilot program implementation.

Once implementation was agreed there was structured communication through the meeting of the steering committee in April, June, August and October. The Manager of Professional Standards and Education was also frequently on the wards, talking to both the HSA and nursing managers, as well as in ongoing meetings. She also conducted regular de-briefings with the HSAs.

The sustainability of HSA programs in locations other than Bendigo Health may be enhanced through a strong working relationship between Bendigo Health and other health services and the ANF. The collaborative partnership with BRIT supported the successful implementation of the program at the organisational level and provided a sound knowledge base for trainees in line with Bendigo Health policies and procedures. Furthermore the combined supervision and shared competency assessment across the two organisations promoted a safe environment for both patients and staff.

Project management and evaluation

A robust framework and well defined processes and guidelines for the HSA role should assist in ensuring timely delivery of the program implementation. Internal staff and newly employed HSAs require sufficient time to adjust to the new role to ensure that the right capability and capacity was available to implement the program.

Complete and comprehensive project management tools (such as duty lists, project plans, and communication strategies) articulated the vision and provided an efficient way for managing the pilot within the project team.

A comprehensive evaluation framework will contribute to consistent measurement processes across areas of program operation and will enable the demonstration of patient and service outcomes. Monitoring of pilot milestones should occur in a collaborative fashion between key stakeholders on a regular basis.

Leadership

Leadership is essential to ensure that programs stay on track and deliver benefits to both the organisation and the staff. Roles and responsibilities must be clearly identified.

Clinical and executive leadership for the HSA pilot was displayed at all levels, providing a strategic and operational direction, a sense of team, and a commitment to the program. Changes in the executive leadership team occurred in the course of the initial year. Both BRIT and nursing staff commented that this may have affected the perception of the program implementation by the nursing staff post-pilot. The leadership displayed by the NUMs contributed to the ongoing success of the program.

6.2 Austin Health

Communication and stakeholder engagement

Communication with all internal and external stakeholders should occur on a regular basis and be tailored to meet the specific requirements of individual groups. An effective communication strategy and plan are used to address the needs of the stakeholders, for communication between stakeholders, and supports the overall implementation and change management strategies.

Structured and regular communication at the Austin Hospital was in place and assisted to enhance clarity and consistency of information in relation to the HA(N) pilot and mitigate misunderstandings of the role and expectations. Additionally, the communications plan promoted transparency of program decisions.

The ANF highlighted a desire for additional stakeholder communication to improve existing relationships with participants in the HA(N) program. Sustainability of HA(N) programs in locations other than the Austin may be enhanced through a strong working relationship between the Austin, other health services and the ANF.

There appeared to be a strong relationship between the Austin and the RMIT. The collaborative partnership with the RMIT supported the successful implementation of the program at the organisational level and provided a sound knowledge base for trainees in line with Austin Health policies and procedures. Furthermore the combined supervision and shared competency assessment across the two organisations promoted a safe environment for both patients and staff.

Project management and evaluation

A robust framework and well defined processes and guidelines for the HA(N) role assisted in ensuring timely delivery of the pilot implementation, avoiding unnecessary delays. Internal staff and newly employed HA(N)s were identified and mobilised early to ensure that the right capability and capacity was available to implement the pilot program.

Complete and comprehensive project management tools (such as duty lists, project plans, and communication strategies) provided a clearly articulated vision and provided an efficient way for managing the pilot.

A comprehensive evaluation framework was not established at the beginning of the pilot program and was developed as the pilot progressed. It is recommended that this be in place at the outset of any future program. Consistent measurement processes across areas of program operation will enable the demonstration of patient and service outcomes as attributed to the pilot program. Monitoring of pilot milestones should occur in a collaborative fashion between key stakeholders on a regular basis.

Leadership

Leadership is essential to ensure that programs stay on track and deliver benefits to the both the organisation and the staff. Leadership must be clearly defined and roles and responsibilities clearly identified.

Clinical and executive leadership for the HA(N) pilot was displayed at all levels providing a strategic and operational direction, a sense of team and a commitment to the program.

It was identified that HA(N) roles were meaningful and rewarding, their contributions were identifiable and mutual respect between staff operating on the pilot wards was evident.

6.3 Lorne Community Hospital

Stakeholder engagement

Ongoing stakeholder engagement is important for the success and acceptance of the program. The pilot at the LCH was developed prior to full external stakeholder consultation.

Overall commentary from the LCH, BMI, ANF and HSU highlighted that initial engagement with stakeholders such as the HSU may have assisted in gaining buy-in and ongoing support of associated health professionals such as radiographers. Challenges have resulted from the limited support of some external stakeholders in the Lorne pilot. Risks exist to the sustainability and feasibility of the remote nurse X-Ray model at LCH if the current champions leave BMI.

Business case development and evaluation framework

In establishing the pilot, a project plan was developed but a formalised business case was not. A formalised business case will support the selection of services by clarifying the service need.

Project plans should outline objectives that are easily measurable and develop a supporting evaluation framework, tools and guidelines in advance to avoid challenges in the ongoing monitoring and evaluation of the project. This will support further quality improvements to the service.

Clinical governance framework: A formalised clinical governance framework should be established with the involvement of the auspice and health service before the commencement of the program to avoid challenges in providing guidance over roles and responsibility, lines of accountability and monitoring quality. The framework should be tailored to the attributes of, and relationship between the auspice and the health service.

The LCH relationship with the auspice was based on existing relationships and there was no formalised agreements established in terms of their role in providing clinical and technical oversight, or quality assurance and feedback. This relationship should be formalised in advance of program implementation.

Ongoing auspice support

As highlighted in the report, the involvement in quality and clinical oversight and training and development of BMI has been imperative to the success of the pilot.

An auspice relationship existed with BMI prior to the commencement of the pilot which allowed the remote nurse X-Ray model to be piloted and caused it to be structured in an efficient way. For example, BMI assisted in the selection of the machine and instructed the same PACS to be used, which allowed efficient transfer of data between services and aided the feedback loop for improved development, quality and radiation safety.

6.4 Conclusion

Across the three workforce models the evaluation has highlighted a number of advantages including overall staff support for the models and patient satisfaction. A number of lessons learned and recommendations have been identified. There are clear interdependencies between the lessons learned and the recommendations. These are common across all workforce models:

- continuing external stakeholder engagement and communication
- defining roles and responsibilities of staff together with supervision and support structures
- providing ongoing training and development for staff
- identifying project management, clinical governance and evaluation monitoring well in advance of project implementation.

Taken together, the lessons learned and recommendations provide the department, the participating services and services considering implementation of the workforce models with a basis for, and implementing strategies to, improve the workforce model and to consider the future roll-out.

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Appendix A Data sources

Data used within the evaluation was received from multiple sources. Below is a list of sources of data, with examples of the forms of data received or used from each source.

Note, the list of data received is not exhaustive, but is representative of the types of data used.

Austin Health – Health Assistant (Nursing) Pilot Project

Source	Data	Examples
Austin Health	Reports	Grant application Evaluation report Project brief Feasibility studies
Austin Health	Figures	Quantitative data reports
Austin Health	Communications	Promotional flyers used internally Internal newsletters Position descriptions and role
Nursing Industry Skills Centre	Training documents	Course outline for Certificate III in Health Services Assistance
Other	Media	Transcript of radio interview – ANF representative

Lorne Community Hospital – Remote X-ray Program

Source	Data	Examples
Lorne Community Hospital	Reports	Grant application Project plan Evaluation report Feasibility studies
Lorne Community Hospital	Figures	Quantitative data reports
Barwon Medical Imaging	Reports	Project overview Historical evaluation reports on visits to LCH pre-pilot Quality reports during pilot
Radiation Safety Unit	Data	Scope limitation data
University of South Australia	Training documents	Course outline for Rural and remote X-ray operator course Quality assurance workbook summary

Bendigo Health – Health Service Assistant Pilot Project

Source	Data	Examples
Bendigo Health	Reports	Workforce Plan 2008-2013 Grant application Evaluation report May 2010 Evaluation Report October 2010 Project brief
Bendigo Health	Communications	Promotional material in ‘Nursing News’ Roadshow presentation
Bendigo Health	Figures	Quantitative data reports
Bendigo Regional TAFE	Training documents	Course outline for HSA course

Data Limitations

All results shown in this report are indicative only, and have been based on information provided to us from LCH and Austin Health.

In preparation of the results shown in this report, we have relied on the data provided to us from the sources described in the tables above. In some cases the data has been collected for the purposes of an evaluation of the pilot project; however this is not the case for all of the data. The data has not been collected for the purposes of determining an evaluation using the IAF framework, and as a result, there are areas where we have had to make assumptions in order to perform the evaluation. The data has been sense checked, and we have been in contact with the relevant suppliers where clarification has been required. However, detailed checks and reconciliations have not been possible due to the nature of the project.

All material assumptions have been documented and described in detail in the body of this report.

Appendix B Consultation list

PwC have consulted with a number of key stakeholders within the program, under the guidance of the Project team.

Austin Health – Health Assistant (Nursing) Pilot Project

Austin Health	Deputy Director Ambulatory and Nursing Services
Austin Health	Executive Director, Ambulatory and Nursing Services
Austin Health	Nurse Unit Manager Ward 8 North
Austin Health	Nurse Unit Manager Ward 7 West
Austin Health	Acting Nurse Unit Manager Ward 7 West
Austin Health	CSU Director Surgical
Austin Health	CSU Director Specialty
Austin Health	CSU Director Medical and Surgical
Austin Health	Project Officer
Australian Nursing Federation	Secretary, Victorian branch
Educational provider (RMIT)	Head of School

Lorne Community Hospital – Remote X-ray Program

Lorne Community Hospital	Director of Clinical Services
Lorne Community Hospital	Registered Nurse
Barwon Medical Imaging	Operations Manager
Barwon Medical Imaging	Chief Radiographer
Radiation Safety Unit	Team Leader
Health Service Unit	Consultant
Australian Nursing Federation	Secretary, Victorian branch
Educational provider (University of Newcastle)*	Deputy Director, University Department of Rural Health – Northern NSW
Educational provider (Monash University)	Head, Department of Medical Imaging and Radiation Sciences

* Several attempts were made to speak with representatives from the University of South Australia to gain additional insight into the course and gain further understanding of remote X-ray requirements. In the absence of this, PwC consulted with Assoc Prof Anthony Smith.

Bendigo Health – Health Service Assistant Pilot Project

Bendigo Health	Executive Director of Nursing and Surgical Services
Bendigo Health	Manager Professional Standards and Education (Nursing)
Bendigo Health	ICU / CCU Nurse Unit Manager
Bendigo Health	ED Nurse Unit Manager
Bendigo Health	Medical Unit Nurse Unit Manager
Bendigo Health	Inpatient Rehabilitation Nurse Unit Manager (Acting)
Australian Nursing Federation	Secretary, Victorian branch
Bendigo Regional TAFE	Senior Educator, Allied Health
External consultant	Previous Manager, Professional Standards & Education (Nursing)

Appendix C Austin Nursing Consultations

Background

During the consultation with the ANF, PwC was asked to undertake further consultation with the Austin to ensure that sufficient engagement with the nursing staff across the three wards occurred. This was completed in addition to the consultation included in the evaluation methodology

Methodology

In order to gain wider engagement of nursing staff, PwC requested that the Deputy Director Ambulatory and Nursing Services advertise the consultations with flyers and ensure NUMs and ANUMs would enable the nursing staff to contribute to the consultations during their shifts. Staff were given the opportunity to provide comment at any time throughout a two hour period.

A conversational approach was used in the engagement of the nursing staff, with the following questions used as guidance:

1. What do you believe worked well with the pilot project?
2. What do you believe were the major challenges of the pilot project and where do you think there may be opportunities to improve the pilot project?
3. Do you believe that the introduction of the HA(N)s may have resulted in an improvement in staff satisfaction? Can you provide evidence of this?
4. Do you believe that the introduction of the HA(N)s may have resulted in an improvement in patient outcomes? Can you provide evidence of this?

Attendees

The following table sets out the details of those that attended the consultation over the two hour period from the wards that engaged in the pilot project.

Total	12	3
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Results

The following table summarises the views obtained in the consultations, which have been summarised by themes.

Theme	Positive aspects	Challenges	Potential opportunities for improvement
Communication and engagement throughout the project	<ul style="list-style-type: none"> There was a high level of communication with the ward staff, including understanding what the role of the HA(N) was on the ward 	<ul style="list-style-type: none"> New staff may not be aware of the role of the HA(N) and could potentially overload HA(N)s or ask them to perform duties outside of their role 	<ul style="list-style-type: none"> Education regarding role of the HA(N)s should form part of ward induction
Recruitment and induction	<ul style="list-style-type: none"> Selection criteria established for recruitment appeared to capture the appropriate personnel for the HA(N) role 	<ul style="list-style-type: none"> The HA(N) role may be perceived as difficult and repetitive given the high level of manual handling required 	<ul style="list-style-type: none"> Ensure appropriate communication is provided to the HA(N)s regarding their potential duties on the ward
Training and education	<ul style="list-style-type: none"> Provision of one week of supernumerary time during the induction period was considered by the nursing staff to be sufficient and worthwhile 	<ul style="list-style-type: none"> Some nurses indicated that the HA(N)s clinical knowledge was limited. It was discussed that this may impact the delivery of patient related duties such as showering and feeding A few nurses indicated that the HA(N)s may have difficulties in understanding patient / clinician choices 	<ul style="list-style-type: none"> Provide support HA(N)s to understand clinical aspects to their duties Provide education and counselling to assist with the acceptance of traumatic events
Role of the HA(N)s	<ul style="list-style-type: none"> HA(N)s assistance with performing ADLs (eg feeding and washing) has enabled nursing staff to focus on other clinical duties (such as medications) more efficiently HA(N)s assistance with transfers has improved the nurses ability to 	<ul style="list-style-type: none"> Some nursing staff indicated that the HA(N)s may be 'task orientated' and therefore focus less on patient enablement and recovery Some nurses commented that some HA(N)s may not be receiving the 	<ul style="list-style-type: none"> Provide greater awareness regarding the key factors that improve patient enablement and recovery Clarify supervision structures and maintain supervision of HA(N) duties by nursing staff at all

Theme	Positive aspects	Challenges	Potential opportunities for improvement
	<p>complete transfers more efficiently and safely</p> <ul style="list-style-type: none"> • Cost effective use of resources when HA(N)s have been used in preference to a patient observer 	<p>appropriate level of supervision for their role</p>	<p>times</p>
Staff satisfaction	<ul style="list-style-type: none"> • Anecdotally staff stated that they feel happier and more satisfied with their work when HA(N)s are present on a shift compared to shifts where HA(N)s are not present 	<ul style="list-style-type: none"> • Some staff suggested that the HA(N)s have grown into their specific roles and associated daily tasks. It was suggested that retaining flexibility was important • Staff indicated that the HA(N)s may, at times, be over utilised and this may therefore impact their satisfaction 	<ul style="list-style-type: none"> • Consider more frequent staff reviews • Consider a greater number of HA(N)s on the wards to meet the needs on the wards
Patient outcomes	<ul style="list-style-type: none"> • Patients have indicated to nursing staff that they benefit from the one-on-one contact provided by the HA(N)s, particularly for those who have a longer stay on the ward • Staff indicated that they no longer receive as many complaints from patients about activities of daily living such as <i>'their food not being hot'</i> 	<ul style="list-style-type: none"> • Some nurses believe that the current duties performed (particularly around the activities of daily living) by the HA(N), coupled with their limited clinical knowledge, may inhibit the opportunity for HA(N)s to be able to identify and report observations, which can be undertaken during showering, feeding and transfers 	<ul style="list-style-type: none"> • Increase HA(N) ability to observe and report activities of daily living

Appendix D Course Content

Austin Health – Certificate III Health Service Assistance Health Training Package 07 Volume 2 of 3: Qualification Framework HLT32507 Certificate III in Health Services Assistance

15 Units of competency are required for award of this qualification, including six core units and 9 electives outlined in the Health Training Package.

Core units

- BSBFLM303C Contribute to effective workplace relationships
- BSBMED201A Use basic medical terminology
- HLTAP301B Recognise healthy body systems in a health care context
- HLTHIR301B Communicate and work effectively in health
- HLTIN301C Comply with infection control policies and procedures
- HLTOHS200B Participate in OHS processes

Electives

- HLTCSO305C Assist with client movement
- HLTCSO306C Respond effectively to difficult or challenging behaviour
- HLTCSO208C Transport clients
- HLTAIN302B Provide support in an acute care environment
- HLTCSO201C Maintain high standard of client service
- HLTCSO304C Support the care of clients
- HLTCSO203B Prepare and maintain beds
- HLTHIR 403B Work effectively with culturally diverse clients and co-workers
- HLTMS203B Organise personal work priorities and development
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Lorne Community Hospital – Ten Week Rural and Remote X-ray Operator Course University of South Australia Cricos No 00121B

Core Knowledge

- Introduction to radiographic equipment
- Basic Physics for Radiography
- Principles of Exposure and Image Quality
- Image Receptor Systems
- Xray Darkroom and Film Processing
- Introduction to Anatomy, Positioning and Image Critique
- Radiographic Anatomy, Positioning and Image Critique - Upper Limb
- Radiographic Anatomy, Positioning and Image Critique – Lower Limb and Pelvis
- Radiographic Anatomy, Positioning and Image Critique – Chest
- Radiographic Anatomy, Positioning and Image Critique – Cervical Spine
- Radiation Safety, Patient Care, Ethics and Legalities
- Clinical Proficiency

Bendigo Health – Certificate III Health Service Assistance Health Training Package 07 Volume 2 of 3: Qualification Framework HLT32507 Certificate III in Health Services Assistance

15 Units of competency are required for award of this qualification, including six core units and 9 electives outlined in the Health Training Package. Throughout negotiations with the ANF, it was agreed that the HSA training program would exclude duties that were deemed to be exclusively performed by nurses. As a result, the following core units were provided to the HSAs as a component of the traineeship:

- Contribute to effective workplace relationships
- Use basic medical terminology
- Provide support in an acute care environment
- Recognise health body systems in a health care context
- Maintain high standard of client service
- Prepare and maintain beds
- Transport clients
- Support the care of clients
- Assist with client movement
- Respond effectively to difficult or challenging behaviour
- Communicate and work effectively in health
- Comply with infection control policies and procedures in health work
- Undertake routine stock maintenance
- Participate in OHS processes
- Work effectively in the population health sector

