Advanced Musculoskeletal Physiotherapy Final Report
September 2015
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Contents

Contents ................................................................................................................................. 3
List of Tables .......................................................................................................................... 5
List of Figures ......................................................................................................................... 5
Abbreviations/definitions ....................................................................................................... 5

Key Messages .......................................................................................................................... 6

Executive Summary .................................................................................................................. 7

Introduction: ............................................................................................................................. 7
Objectives: ................................................................................................................................. 7

Methodology and Implementation: ........................................................................................... 7

Training: .................................................................................................................................... 8
Achievements: ............................................................................................................................ 8

Impact and Implications: ............................................................................................................ 9
Recommendations: ..................................................................................................................... 10

1. Introduction and Background ............................................................................................ 11
   a) Description of project, including objectives and strategic direction .................................. 11
   b) Project structure and communication strategies ............................................................... 11
   c) Role of lead sites .............................................................................................................. 13
   d) Site profiles ................................................................................................................... 13
   e) Staff Profiles .................................................................................................................. 15

2. Implementation and Program Delivery ................................................................................. 16
   a) Overview of the methodology .......................................................................................... 16
   b) Implementation .............................................................................................................. 16
   c) Ethics ............................................................................................................................. 18
   d) Key Learnings .............................................................................................................. 18

3. Training and Education ........................................................................................................ 21
   a) Clinical Education Framework ...................................................................................... 21
   b) Training Days – feedback and description ...................................................................... 23
   c) Challenges and Barriers ............................................................................................... 24

4. Key Achievements ................................................................................................................. 25
   a) Implementation Sites ................................................................................................... 25
   b) Lead Sites .................................................................................................................... 29

5. Impact and Implications ....................................................................................................... 30
   a) Unexpected benefits ...................................................................................................... 30
   b) Unexpected Challenges ............................................................................................... 30
   c) Future directions .......................................................................................................... 30
   d) Succession Planning ..................................................................................................... 31
6. Conclusion .................................................................................................................................................. 33
7. Key Recommendations ............................................................................................................................. 34
References .................................................................................................................................................... 36
Appendix A: Details of Training days held at the Victorian Department of Health and Human Services ................................................................................................................................. 37
Appendix B: Feedback from Implementation Sites about the AMP CEF .................................................. 39
Appendix C: Final outcomes of Implementing Advanced Musculoskeletal Physiotherapy services .............................................................................................................................................. 46
Appendix D: Top 3 Achievements Implementation sites ............................................................................. 52
List of Tables

Table 1: Enablers and barriers encountered during succession planning ........................................... 32

List of Figures

Figure 1: Support for DHHS/Lead Site project model as indicated by Implementation Sites .................. 17
Figure 2: Key learning for sites during the project .................................................................................. 19
Figure 3: Advanced Musculoskeletal Physiotherapy pathway to competency in the workplace .............. 22
Figure 4: Physiotherapists understanding of AMP CEF comparing September 2014 with May 2015........ 23
Figure 5: Top Three Achievements of Implementation Sites ................................................................. 26

Abbreviations/definitions

AHA  Allied Health Assistant
AMP  Advanced Musculoskeletal Physiotherapy /Physiotherapist
APA  Australian Physiotherapy Association
CEF  Clinical Education Framework
Certificate IV Training and Assessment recognised Australia wide qualification in training and assessment in the workplace
CPD  Continuing Professional Development
DHHS or ‘the Department’ Department of Health and Human Services (Victoria)
DNA  did not attend
ED  Emergency Department
EDSTIRC  Emergency Department Soft Tissue Injury Review Clinic
ESOP  Expanded Scope of Practice
GP  General Medical Practitioners
HWA  Health Workforce Australia
IT  Information Technology
Medicare Australia’s universal health insurance scheme
Musc  Musculoskeletal
OOS  Occasions of service
OF  Operational framework
PAR  Post arthroplasty review
PD  professional development
PSR  post-surgical review
PwC  Price Waterhouse Coopers
RiskMan  Reporting mechanism for Victorian Health Incident Management System
Telehealth  the provision of healthcare and education over a distance, by the use of telecommunication technologies*
THR  total hip replacement
TKR  total knee replacement
VIRIAF  Victorian Innovation and Reform Impact Assessment Framework

*as defined by the International Organisation for Standards
Key Messages

- Advanced musculoskeletal physiotherapy (AMP) services provide an alternative model of care and adjunct to traditional medical care for key population groups such as patients with arthritis or patients requiring joint replacement.
- The Victorian funded AMP Implementation Program (2014-15) aimed to test and measure impacts of this health workforce redesign and develop a state-wide consistent approach to workforce redesign for AMP roles which did not exist prior to the AMP Program.
- Four different AMP models of care were implemented in this project: Post Arthroplasty Review (PAR) clinics (10 sites), a primary contact physiotherapist in the Emergency Department (one site), an Emergency Department Soft Tissue Injury Review Clinic (EDSTIRC) (one site), a Neurosurgical Screening Clinic (one site).
- An external evaluation conducted by Price Waterhouse Coopers (PwC) concluded the AMP program is cost efficient, cost effective and sustainable when compared to traditional medical models whilst maintaining a safe and high quality of care.
- Twenty seven advanced musculoskeletal physiotherapists participated in the program.
- There were 3,152 planned occasions of service (OOS) during the data collection period (Sept 2014 to June 2015)
- The PAR model of care improved quality of care demonstrated by consistent and timely communication to GP and utilization of validated patient outcome measures.
- No clinical adverse advents were reported across all 12 participating health services with one Riskman incident and one patient complaint that related to processes not clinical care.
- The project demonstrated a range of public and private funded AMP models can be achieved across a wide range of healthcare services.
- At the end of September 2015, 10 health services (77%) secured funding to continue AMP services post implementation, with the outcome of the remaining 2 health services (23%) pending. The high level of support highlights the recognized benefits AMP clinics can have in service redesign and improved access to specialist services.
- The AMP clinical education framework (CEF) has introduced health services to statewide standard of skill in competency based training and assessment. As a result Victoria has a competent workforce of experienced physiotherapists whose skills can be recognized and transferred between health services.
- Resources in the form of learning, competency, training and operational framework have been developed and are freely available on the DHHS website.
- The development of an evaluation tool based on the Victorian Innovation and Reform Impact Assessment Framework (VIRIAF) enabled health services not only to identify evidence of site specific impacts in terms of cost savings, increased capacity, and enhanced patient outcomes, but also enabled evidence to be brought together for a systems view of the current impact and future potential of AMP models.
- The PwC report which utilized the VIRIAF reported the AMP program demonstrated improved access to care, improved quality of care and the patient journey, and optimized the use of medical specialists time and expertise which was consistent with findings from the final progress reports submitted to the DHHS by each Implementation Site
- The PwC final evaluation indicated high patient satisfaction across all AMP models with 96% of the 548 patients surveyed responding they were satisfied with their care provided by the physiotherapist, and 78% of 102 respondents from the workforce indicating they had a good understanding of the AMP role.
- Collectively the findings from this report, the individual Implementation Site reports, and the PwC evaluation indicate AMP services are well placed to address the rising demand and increased burden of patients with musculoskeletal conditions presenting to Victorian public hospitals.
- Future expansion in the depth and breadth of AMP services requires the integration of providers, standardized care, consistent use of patient outcome measures, capacity for change across health services, and embedding AMP services into routine clinical care.
- This report should be read in conjunction with the PwC report titled Evaluation of the Advanced Musculoskeletal Physiotherapy Program: Final Report, December 2015.
Executive Summary

Introduction:
With the current and predicted rising demand for healthcare in Victoria, service delivery innovations need to be considered. In most healthcare networks, there are huge pressures of demand for outpatient specialist appointments and patients are faced with delayed access to outpatient care, leading to poorer patient outcomes. The Department of Health and Human Services (DHHS) Health Workforce Reform Implementation Taskforce has identified wider implementation of allied health Advanced Musculoskeletal Physiotherapy (AMP) services in Victoria as a priority to improve patient access, quality of care and cost effectiveness. Over the past decade experienced advanced musculoskeletal physiotherapists who have completed additional training, in collaboration with the medical teams, have been involved in delivering clinical services that include tasks traditionally performed by medical specialists. These AMP services have been successfully implemented in orthopaedics, neurosurgical and emergency departments in public hospitals across Victoria. AMP roles have proven to be cost effective with high patient satisfaction and improved patient outcomes.

In 2013, the Victorian DHHS funded the “AMP Implementation Program” which involved the 13 AMP services in 12 implementation sites across the state of Victoria, Australia. Three lead sites (Alfred Health, St Vincent’s Health, and Melbourne Health) with various well established and successful AMP services were appointed to support, resource, and mentor the 12 Implementation Sites.

Objectives:
The AMP Implementation Program was underpinned by the following broad objectives:

- To implement AMP models as part of normal service delivery
- To develop and embed a range of AMP models as a cost effective model of care to manage increasing demand
- To improve patient access to services and reduce waiting times
- To improve quality of care and the patient journey
- To optimise utilisation of medical specialists time and expertise

Following expressions of interest process, seven metropolitan, three regional and two rural health services were selected to participate as implementation sites. Ten sites implemented a Post Arthroplasty Review (PAR) clinic, one site expanded an existing Neurosurgical Screening clinic, one site implemented an Emergency Department Soft Tissue Injury Review Clinic (EDSTIRC) and a further site implemented a primary contact AMP service in the Emergency Department (ED). Nine sites had existing AMP services in operation in other areas; three sites implemented an AMP service for the first time.

Methodology and Implementation:
With the assistance of the lead sites, implementation sites were required to implement key frameworks that addressed clinical governance, operational, clinical education and evaluation requirements. Physiotherapists involved committed to undertake additional training and participate in the competency based training and assessment program which was the main component of the AMP Clinical Education Framework (CEF).

The project evaluation was based on the Victorian Innovation and Reform Impact Assessment Framework (VIRIAF) and a comprehensive evaluation tool consisting of metrics incorporating patient, organizational, workforce and health economic outcomes. All sites were successful in obtaining ethics approval to conduct the evaluation. Price Waterhouse Coopers (PwC) were appointed as the independent external evaluators for this project. An evaluation data collection tool was developed by PwC in collaboration with the lead sites and the DHHS. Prospective data was collected from September 2014 to June 2015. Baseline data collection was impacted by local factors, however when available was retrospectively collected from a minimum of three data collection periods of one month each in the
previous 12 months to account for seasonal variation. Preliminary site reports of project findings were provided by PwC in March 2015 and a final evaluation report in December 2015\textsuperscript{12}. Implementation sites submitted to the DHHS, via the lead sites, quarterly progress reports and a final report in May 2015. The lead sites provided support for the implementation sites throughout duration of the project and facilitated communication between the DHHS and PwC.

**Training:**

Twenty seven physiotherapists were involved in this project and undertook the AMP Clinical Education Framework (CEF) competency based training and assessment program. The AMP CEF is designed to allow for modifications to be made to meet the individual requirements of the physiotherapist, the AMP service being implemented and the organisation. The AMP CEF was accessible to sites via the DHHS website. Guidance for implementation of the AMP CEF provided by lead sites included:

- Visits by implementation site physiotherapists to observe lead site clinics in operation
- Visits by lead site physiotherapists to support implementation of the AMP CEF
- Case presentations provided by lead sites at training days, in newsletters and via webinar
- Radiology and case presentations assessed remotely by lead sites

Key challenges identified by implementation sites included finding non-clinical time to complete the required training and assessment, and becoming familiar with the steps involved and documentation required. Some sites not familiar with competency based training and assessment initially found the process overwhelming and needed additional guidance.

**Achievements:**

1. Integration of the AMP model as normal service delivery was achieved

There were 3152 occasions of service over the twelve metropolitan, rural and regional implementation sites. The majority of services were co-located and well supported within medical clinics. This support is demonstrated by the high number of project services that have some form of continuing funding. Twenty-seven physiotherapists and 12 health services have implemented the Victorian AMP Operational and CEF.

2. A cost effective model of care was implemented that managed increasing patient demand

All of the AMP models of care were found to be cost effective with the exception of the Neurosurgical Screening clinic which had insufficient data for the evaluation\textsuperscript{12}.

- A direct comparison of the cost per occasion of service (OOS) for the PAR model compared to the baseline traditional model of care indicated the PAR model recorded an average saving per OOS of $36\textsuperscript{12}.
- When the recurring costs which included a portion of time required for training and non-clinical time were calculated for PAR, the average recurring cost per OOS was $58 (range $40-77). A recurring cost for OOS was not available for the baseline\textsuperscript{12}.
- A reduction in the ED representation rate of patients following arthroplasty at a regional centre implementing the PAR model decreased from 30 patients in the comparative baseline period to none in the current data collection period equating to a cost savings of $31,020 over 10 months or $3102 per month\textsuperscript{12};
- A 7.5% reduction in the need for manipulation under anaesthetic for patient following knee arthroplasty surgery was recorded in a metropolitan hospital resulting in a potential cost savings of $237,600 (30 patients, cost of manipulation under anaesthetic $8000)\textsuperscript{12}.
- The recurrent cost per OOS for the EDSTRIC was $30\textsuperscript{12}

3. Increased patient access to services and reduced waiting times.

- Six of the 10 PAR models of care collected data on the number of new and review patients seen by surgeons compared to the pre-implementation period. Results were not consistent across all sites due to variables in the models of care, surgeon staffing and leave. Three sites recording an increase in the number of new patients seen by surgeons (20-44%) and three sites recording an increase in the number of review patients (7-34%) seen during the implementation period – two sites reported a reduction in new patients seen by the surgeon (9-27%)\textsuperscript{12}.
- The implementation of the EDSTIRC reduced waiting times for fracture clinic appointments by six days (9 days compared to 15 in the baseline period). The average wait days for an
orthopaedic clinic appointment dropped by 30 days (220 days compared to 250 in the baseline period) 12. Flow on effects into ED were also reported with reductions in length of stay for patients with musculoskeletal conditions.

- The rural AMP ED service in a holiday destination with peak weekend demand demonstrated successful recruitment of experienced physiotherapists from the private sector to support the public sector at times of high demand.
- The Neurosurgical Screening clinic led to an additional 200 appointments.

4. Improved quality of care and patient journey was enhanced

Eight of the 10 sites implementing the PAR model of care met the Australian Orthopaedic Association guidelines13 for the recommended post arthroplasty review time points. Prior to the AMP program there was no standardised care pathway for patients following arthroplasty in place at most sites. Additionally for the PAR clinic models of care:

- 87-100% had an patient reported outcome measure taken compared to a negligible number at baseline
- 88-99% of patients had routine communication with primary healthcare provider post appointment where indicated
- Across the 13 services, 88-100% of patients surveyed were satisfied with the care they received from the physiotherapist.

The EDSTIRC demonstrated improvements in quality of care by increasing evidence-based management of knee injuries by 24% (33% to 57%) and shoulder dislocations by 37% (37% to 73%).

For the 3152 patients seen throughout the AMP program, no clinical adverse incidents were reported.

5. Medical specialists time and expertise was optimised

- The PAR model of care recorded the average time saved by the surgeon per OOS was 15 minutes (range 7-28 minutes) which equates to an expected savings over a 12 month period to be $74,904 across all sites12.
- Only 5% of 2363 PAR appointments were formally referred for a specialist review
- The EDSTIRC recorded an 11 minutes saving per OOS of specialist time which would equate to a savings of $13,608 over 12 months12.
- Over the duration of the EDSTIRC implementation period, the Orthopaedic team requested for an expansion of the types of referrals to be directed to EDSTIRC instead of Orthopaedic Clinics
- The Neurosurgery Screening clinic reported 87% of the 134 patients referred for a specialist appointment, seen by the AMP physiotherapist, did not require a specialist appointment.

Impact and implications:

With a focus on delivering cost effective models of care to improve patient access and quality of care, the AMP Implementation Program was successfully implemented across a variety of settings: rural, regional and metropolitan, and departments: emergency, orthopaedics and neurosurgery. Several rural/regional sites implemented AMP services for the first time. The remaining sites further established AMP services to embed these roles as part of standard clinical practice.

The strength in engaging an external evaluator to provide comprehensive and in depth analysis was well recognised and there was very strong support from implementation sites for the mentor/lead site model. The tools developed in the project evaluation will have wider benefits to other networks in Victoria and nationally and across other disciplines. The sustainability of AMP services is promising with the expansion of a flexible and competent AMP workforce, well supported by the consolidation of strong working relationships between networks.

Integral to the success of the AMP project, stakeholder support has grown throughout the project which highlights the capability and capacity of the experienced physiotherapists in service provision across a broad scope of networks and service models. The future is promising for the delivery of AMP service with 10 out of the 13 AMP services having secured further funding. It is important to note this report should be reviewed in conjunction with PwC final report that contains a detail analysis of the final project outcomes.
**Recommendations:**

Key decision makers should be encouraged by the findings of this report that indicate investing in AMP services is cost effective and safe model which contributes to improvements in organisational key performance indicators, enhance clinical practice and keeps patients highly satisfied. Future opportunities exist in expanding and further embedding AMP services in breadth and depth, within existing services.

This project has created the evidence base for AMP services to be an integral part of the solution to the increasing demands facing Victorian public hospitals. Implementing the governance, operational and clinical education frameworks underpinning AMP services has been key to success. This project has introduced many organisations to the AMP competency based training and assessment program and as a result Victoria will have a competent workforce of experienced physiotherapists whose skills can be recognised and transferred between organisations. The lead site model and appointment of an external evaluator is recommended for future projects. The sharing of expertise and resources between health services and across disciplines, particularly the medical specialities, has created a positive cohesive culture that recognises the importance of good clinical governance and lifelong learning that can only enhance the care we deliver to our patients.

Future expansion in the depth and breadth of AMP services requires the integration of providers, standardized care, consistent use of patient outcome measures, capacity for change across health services, and embedding AMP services into routine clinical care.
1. Introduction and Background

a) Description of project, including objectives and strategic direction

In Victoria, there has been a renewed momentum for workforce redesign and reform with a strong emphasis on workforce planning and innovation. The Department of Health and Human Services (DHHS) Health Workforce Reform Implementation Taskforce has identified wider implementation of allied health Advanced Musculoskeletal Physiotherapy (AMP) services as a priority to improve patient access, quality of care and cost effectiveness. The work of the Taskforce is guided by the Victorian Health Priorities Framework 2012-22 and aligns with the Australian Council of Health Minister’s Advisory Council’s National Health Workforce Innovation and Reform Strategic Framework for Action 2011-15. Over the past decade, in collaboration with medical colleagues, experienced advanced musculoskeletal physiotherapists who have completed additional training have been involved in delivering clinical services that include tasks traditionally performed by medical specialists. These AMP services have been successfully implemented in orthopaedics, neurosurgical and emergency departments in public hospitals across Victoria. AMP roles have proven to be cost effective, achieved high patient satisfaction and improved patient outcomes.

In 2012, Health Workforce Australia (HWA) funded the Expanded Scopes of Practice (ESOP) program to implement and evaluate innovations and assess its impacts on workforce productivity, recruitment and retention. The Physiotherapists in the Emergency Department (ED) sub-project had two lead sites, each with an established model of care involving advanced musculoskeletal physiotherapists, a training pathway, and capacity to provide guidance and support to a number of implementation sites. In Victoria, Alfred Health was lead site for five implementation sites. The HWA project demonstrated outcomes consistent with evidence supported in the literature, indicating a safe and effective model of care that improved patient access and flow through the ED, improved key performance indicators, achieved high patient satisfaction and optimised utilisation of medical specialists’ time and expertise.

In 2013, the DHHS funded the “AMP Implementation Program” which involved implementing 13 AMP services at 12 sites across the state of Victoria, Australia. Three lead sites (Alfred Health, St Vincent’s Health and Melbourne Health) with various established and successful AMP services were appointed to support, resource and mentor the 12 Implementation Sites. The methodology and resources developed by Alfred Health for the HWA ESOP project provided the foundation for the Department led AMP Implementation Program. The AMP Program represents the Victoria-wide implementation of advanced musculoskeletal physiotherapists in orthopaedic, neurosurgical and ED services.

Objectives

The AMP Program is underpinned by the following objectives:

- To implement AMP models with a focus on Post Arthroplasty Review (PAR) clinics, primary contact physiotherapy in the ED, Emergency Department Soft Tissue Injury Review Clinic (EDSTIRC), and neurosurgical screening clinics across Victoria as part of normal service delivery
- To develop and embed the full range of AMP models as a cost effective model of care to manage increasing demand, particularly for ED, orthopaedic and neurosurgical services
- To improve patient access to services and reduce waiting times
- To improve quality of care and enhance the patient journey
- To optimise utilisation of medical specialists time and expertise

b) Project structure and communication strategies

Following an expression of interest process, seven metropolitan, three regional and two rural health services were selected to participate as implementation sites. Nine sites had successful AMP services in operation in other areas; three sites implemented an AMP service for the first time.

The project structure of the AMP program included a project lead team, a senior advisor from DHHS, and the twelve participating metropolitan and regional/rural health services, details of which are found on pages 12-13. The models of care implemented included:

- 10 sites implemented PAR Clinics*
The project lead team comprising of the DHHS, Alfred Health, St Vincent's Health and Melbourne Health, provided input, guidance, resources and mentoring support to implementation sites. Participating health services were required to work collaboratively with their project lead in implementing their model; Alfred Health mentored seven sites, St Vincent's Health four sites and Melbourne Health one site.

An external evaluator, Price Waterhouse Coopers (PwC), was appointed by the DHHS to collaborate with the project lead team to evaluate the models implemented at each site and to more broadly provide a system review for future potential replication of the implemented AMP models. A requirement of the project evaluation was that the approach taken and project deliverables was based on the Victorian Innovation and Reform Impact Assessment Framework (VIRIAF) \(^1\). The external evaluator took guidance, advice and direction from the project lead team, with ultimate sign off from the department.

All 12 sites utilised a similar project management structure consisting of a project sponsor, project manager, steering committee, working party members and subject matter experts. The project sponsor was frequently a member of hospital executive or Medical Unit director. The project manager at each participating health service was accountable for timely and successful delivery of project requirements for that organisation. The project manager was supported by a wider project team typically consisting of key stakeholders and representatives from the AMP team. Subject matter experts typically consisted of representatives from radiology, information technology, finance departments, ethics and consumer representatives.

Communication strategies between the project lead sites and the participating health services included regular teleconferences, and emails. In some instances, a representative from the lead site visited the implementation site and in most cases a member from the AMP team of a participating health service visited their project lead hospital to observe their established AMP clinic. There were four training days convened at DHHS for all participating health services for the dissemination of information, discussion and sharing of ideas. The project lead team and the DHHS communicated via regular face to face meetings supplemented by teleconferences and emails to assist in the co-ordination and direction of the AMP project. Towards the end of the project the lead sites conducted anonymous online surveys to gather feedback from the implementation sites relating to the program, training days and the AMP CEF. The information collated from these surveys have been utilised in the writing of this report.

**Stakeholder engagement**

Eleven (85\%) of 13 AMP services rated the Head of Unit and the consultant staff as the most important stakeholder group, followed by Executive (n=5, 38\%), Physiotherapy Manager and Physiotherapy staff (n=4, 31\%) and the administration/patient booking staff (n=3, 23\%).

The majority of sites rated meetings or individual conversations as the most effective form of communication with the Head of Unit or consultant stakeholder group. Seven sites rated communication by email as the second or third most effective method of communication with the added advantage of documenting the conversation.

**Key Governance groups**

The success of the AMP implementation program was underpinned by a comprehensive clinical governance structure supported by appropriate policies and procedures. In many cases, the robust clinical governance policy with accompanying documents, such as a risk register, helped overcome barriers to key stakeholder support that related to risk mitigation. This consultative process reassured key stakeholders that risk mitigation had been adequately addressed. As the project progressed, the model of care of many sites changed and matured. This was especially evident as initially in the clinical setting at some sites the advanced musculoskeletal physiotherapist was required to report to the...
specialist following every patient. As the medical specialist gained confidence in the physiotherapist the physiotherapist progressed to only being required to report cases of concern to the specialist.

c) Role of lead sites
The role of the project lead sites was to provide the external evaluators with guidance and advice on project evaluation, and to mentor and support their implementation sites in:
- Development of project plan and timeframes
- Identification of project risks and mitigation strategies
- Support with clinical guidance and service implementation
- Support training, education and competency work based learning
- Assist in engagement of key stakeholders
- Assist in development of business cases, as required
- Assist in evaluation activities and collection of data relating to patient journey, activity, throughput and outpatient follow-up.

Considerable mentoring support and examples of policies and documents from the lead sites were provided to the implementation sites to optimise the consistency of approach across sites.

d) Site profiles
Of the ten PAR clinics, six were located in a metropolitan hospital, three in a regional health service and one in a rural setting. All regional and rural PAR services identified the potential for Telehealth to optimise patient access to PAR services and one implemented this through the project. Of the remaining services, the primary contact physiotherapy ED service was established in a rural health service whilst the Neurosurgical Screening Clinic and ED STIRC were located within metropolitan health services.

Models of care
PAR clinics
I. PAR Overview
All sites that implemented a PAR service identified the increasing number of joint replacement surgeries were contributing to long wait times in the orthopaedic outpatient departments. There were an insufficient number of post-operative orthopaedic outpatient review appointments to meet the demand. In each case, the existing traditional model of care provided inconsistent time points of patient review that fell short of meeting the review time points recommended Australian Orthopaedic Association guidelines.\(^\text{13}\)

Common objectives for the implementation of a PAR clinic were:
- To improve the orthopaedic outpatient experience for patients following elective and uncomplicated hip or knee arthroplasty
- To optimise utilisation of the orthopaedic surgeon’s time and expertise for new or complex patients.

Inclusion criteria for PAR clinics included uncomplicated primary total hip and knee arthroplasty. Exclusion criteria for the PAR clinics included:
- Revision surgery for joint arthroplasty
- Intra-operative fracture
- Wound infections post-surgery
- Complicated inpatient stay post-surgery
- Joint arthroplasty in the management of conditions other than osteoarthritis e.g. tumor, Pagets
- Complicated comorbidities
- Patient identified by the orthopaedic consultant at the time of surgery as not appropriate for PAR
- Patient requesting not to be seen in the PAR clinic.

The PAR clinics implemented were usually a 3-4 hour clinic, staffed by one to two physiotherapists. Over a fortnight the number of PAR clinics in operation across all sites ranged from one to five.

II. PAR Public/Private model of care
In all but two organisations, the AMP service conducted post-arthroplasty reviews for public patients in the public hospital setting. The exceptions were two regional health services which established a PAR clinic within a dual public-private model of care, whereby the orthopaedic surgeons engaged by the
hospital also operated and consulted privately. In each case the AMPs at these health services provided public post-arthroplasty reviews for patients that would have otherwise been seen in the surgeon’s private rooms. The shift of operation costs from the private to the public sector presented challenges for the sustainability of these PAR clinics and each proposes a different funding model. One site intends to draw funds from the existing physiotherapy department budget, whilst the other has agreed to provide AMP services under the auspice of a private surgeon.

III. PAR Review points
The scheduled timing of review points for patients post arthroplasty varied between implementation sites and was determined by the orthopaedic medical director at each site. At one site patients were discharged at three months post-arthroplasty whereas other sites would continue with regular post arthroplasty reviews until five years and every subsequent five year interval. The most common review point was 12 months with nine (90%) PAR services including that review time point in their model of care.

EDSTIRC
The organisation that implemented an EDSTIRC identified an increasing demand for Orthopaedic Consultant services that exceeded outpatient capacity. A significant proportion of these patients where referred by General Practitioners (GP) for management of an acute musculoskeletal injury following an initial presentation to the ED who had been discharged with a plan for follow up GP care. Collaboration between the Physiotherapy and Orthopaedic departments identified that Advanced Musculoskeletal Physiotherapists were well positioned to manage patients presenting from ED with acute musculoskeletal injuries. Two clinics per week were scheduled co-located with the orthopaedic fracture clinic.

The objectives for the implementation of the EDSTIRC were to:
- Improve patient access to care
- Provide evidenced based best practise
- Ensure consistency in the management of acute musculoskeletal injuries post ED discharge
- Reduce unnecessary demand of acute musculoskeletal injuries on Orthopaedic clinics
- Ensure appropriate triage for consultant review post-acute musculoskeletal injury
- Monitor access, safety, quality and patient satisfaction.

ED
The rural site that implemented an ED primary contact AMP did not have a pre-existing AMP service. Pre-implementation, it was established that in a one-month period over winter, 15% (n=203) of patients presenting to ED were appropriate for an AMP service. Due to limited weekend radiology services, weekend patients requiring X-ray were requested to represent on the Monday after the weekend. This created extra burden on ED medical staff to effectively manage weekend referrals in addition to new patient presentations on the Monday. This health service is located in a holiday destination with peak demand on weekends. Patients requiring Orthopaedic Surgeon assessment were required to travel to a larger regional centre for management. The primary contact AMP service averaged 8 hours of direct patient contact time per week.

The objectives for implementation of the ED AMP service were to:
- Decrease burden on medical staff
- Improve quality of care and patient satisfaction and by:
  - Avoiding travel time and cost to larger centres for patients meeting inclusion criteria.
  - Initiating early physical management of patients meeting inclusion criteria
  - Coordinating early referral for community physiotherapy management
- Sharing expertise and contribute to medical officer training on musculoskeletal conditions
- Work towards long term sustainability of the AMP service in ED by
  - Succession planning using the existing physiotherapy department workforce or external recruitment of experienced musculoskeletal physiotherapists.
  - Presentation of a business case to executive for future funding

Neurosurgery Screening
The large metropolitan hospital that implemented the Neurosurgery Screening Clinic is situated in one of Australia’s fastest growing population corridors. The pre-existing clinic had over 430 non-urgent patients
waiting for an appointment to see a specialist, the longest wait time being 797 days. The overall wait list for the clinic had grown from 200 patients in May 2012 to 600 patients in August 2013. 90% of non-urgent referrals to the Neurosurgery clinic with spinal pain were triaged as appropriate for the AMP. Best practice for spinal pain was identified as timely assessment and management, and the majority of the patients on the waiting list did not require surgical review by a consultant. During the project period three ½ day neurosurgical screening clinics per fortnight were established.

The objectives of implementation of the Neurosurgical Screening Clinic were to:
- Meet the demand of high number of referrals and reduce the long waiting list (longest waiting period for urgent and semi urgent patients was 800 days)
- Ensure that only patients with spinal pain that are amendable to surgery and who wish to consider a surgical option are reviewed by the consultant
- Provide timely review and management for patients with spinal pain.

e) Staff Profiles

Qualifications: AMP mandatory and preferable requirements
Implementation sites reported a range of mandatory and preferable post-graduate qualifications for physiotherapists performing in the AMP roles. Of the 10 AMP services that required an AMP to have a post-graduate qualification, two (20%) required a graduate certificate, two (20%) required a graduate diploma and six (60%) required a masters qualification. Two of the 12 implementation sites did not have a mandatory requirement for post-graduate qualifications. These services were regional or rural which suggests recruitment of physiotherapists with the desired higher qualifications may be challenging outside Melbourne metropolitan region and/or expectations regarding level of qualifications is potentially lower.

The AMP CEF is intended for physiotherapists entering at a postgraduate level of Masters or equivalent. Of the 27 physiotherapist involved in the AMP clinic 17 (63%) met this requirement. Three (11%) held a post graduate diploma, six (22%) had no post-graduate qualifications and one (3.7%) described their highest level of qualification as ‘other’.

Experience: AMP mandatory and preferable requirements
Eleven of the implementation sites required AMPs with at least 5 to 10 years of relevant post graduate experience with the remaining service required a mandatory 2 to 5 years. There were no differences observed between regional and metropolitan sites. The majority of physiotherapists (17, 73%) had previously worked in an AMP role. Twenty-two physiotherapists (81%) had greater than 10 years of relevant post-graduate experience, while four (15%) had between 5-10 years and 1 (4%) had between 2-5 years of experience).

The AMP model provides opportunity for experienced clinicians in the private sector to engage in public health care. Of the 27 physiotherapists involved in the AMP project, two (7%) were recruited from the private practice sector in a rural and regional health care setting.

Overall the vast majority of AMPs involved in the project were very experienced clinicians with relevant post-graduate qualifications.
2. Implementation and Program Delivery

a) Overview of the methodology
The DHHS expression of interest process was used to select the implementation sites. This process assisted sites in the conceptual and planning stages as it required sites to identify and establish a clear need for the new service, engage key stakeholders and garner their support, and establish achievable aims and objectives for their service model. The AMP Operational Framework (OF) provided sites with a comprehensive guide to implement the AMP service. The AMP OF details the operational considerations of implementing a new service and was used by sites in conjunction with the AMP CEF. The AMP OF was introduced to sites at the first training day and important aspects were covered in detail in subsequent training days. The AMP OF consists of four stages:

Conceptual stage
The conceptual stage outlines the steps to establish the service need and justify the implementation of the AMP program. In this stage, sites established evidence to support the need for the program, reviewed the current practice, considered evidence-based practice, proposed the new model of care, described service benefits, identified barriers and enablers of the project, and identified key stakeholders including clinical champions.

Planning stage
The planning stage requires sites to develop a project plan and operational guidelines. Examples were provided to sites from the mentor sites. The project plan comprised of: project aims and objectives; scope of practice; additional education and training, and competency assessment required for the AMP; the clinical governance framework including risk register and adverse event management. The operational guidelines detail the model of care, scope of practice, service description, and recruitment.

Implementation stage
The AMP services at the 12 sites commenced from March 2014. The implementation stage consisted of developing an orientation program for all the staff involved. The education and training program was regularly reviewed to ensure it addressed the needs of the service, and that the AMP was on track to achieve competency.

Evaluation stage
PwC led the evaluation stage direction and guidance from of the lead sites and the DHHS. Using the VIRIAF as its basis, a comprehensive evaluation tool was developed and consisted of metrics including patient outcomes, organizational outcomes, clinician outcomes and health economic outcomes. The majority of the data collected was via a clinician completed Excel tool, supported by formal site interviews, questionnaires and site reports.

b) Implementation
Set-up and establishment phase
All sites used a project management structure consisting of a project sponsor, project manager, steering committee, working party and subject matter experts to develop, implement and advance the program at their health service. The majority of sites (11, 92%) felt that the steering committee and the person ultimately accountable for the project helped moved the project forward. Nine sites (85%) reported project milestones were always achieved.

In the early stages of the program, sites reported commencing services at a lower capacity to allow time to test the service model, address any arising issues and develop clinician competency. As the program continued, sites reported ‘ramping up’ their service to increase service capacity and improve efficiency and some sites commenced a second clinic or expanded existing clinics.

Changes in service model
As the AMP program matured, the service models changed. Four sites (3 PAR, 1 EDSTIC) reported changes in the patient inclusion and exclusion criteria resulting from medical staff confidence in the physiotherapist and the AMP model. In the PAR model, this resulted in the expansion of inclusion criteria to include of patients with post-operative complications and more complex procedures, and in additional
PAR review time points. In the EDSTIC, inclusion criteria expanded to include referrals from GPs in addition to ED referrals, as well as expansion of patient conditions.

Six sites reported changes in the method of reviewing patients with the specialist team. Typically the reviewing method changed from discussing with the specialist team after every patient interaction progressing to an as needed basis or at the end of the clinic. Four sites reported changes in the process of referral, including the method of identifying patients appropriate for their service.

Working relationship with Lead Sites
There was overwhelming support for the lead site model used in the program. All sites reported finding the lead site role to be helpful with their project. Positive themes on the relationship with lead sites include (listed in order of frequency of responses):

- Experience and content knowledge of the lead sites
- Guidance, feedback, encouragement and understanding to project
- Importance in liaising with various stakeholders, facilitated common themes and collaboration between sites
- Assistance in problem solving and providing strategies to challenges
- Ensuring sites stayed on track, met time frames, assisted in data collection
- Assistance with competency development and assessment
- Reviewing documents and processes.

There was strong support from sites for most aspects of the roles and responsibilities of the lead site and the structure of the DHHS/lead site model in providing sites with mentoring as seen in Figure 1. When asked if the project manager was provided with timely decisions, adequate resources and a clear decision framework, 10 sites (77%) strongly agreed/agreed.

![Figure 1: Support for DHHS/Lead Site project model as indicated by Implementation Sites](image-url)

One site indicated challenges they encountered with the working relationship with their lead site one were:

- Interaction with lead sites took time away from clinical care
• Communication between sites and PwC/DHHS may be more efficient/effective without lead site
• More scope to tailor to local environment without the influence of the lead site

Working relationship with external evaluator

There was overall very good support for using the external evaluator, PwC, to assist in the project evaluation. However, the delay in the appointment of PwC to the project and the operational issues with the evaluation process created challenges for some sites.

Overall most sites reported the external evaluator’s expertise in health economics had a positive impact on project outcomes. It enabled a comprehensive, robust, unbiased and in-depth analysis of the project beyond which would have been reached by independent hospitals alone. This strongly supported business cases to be developed with content applicable to assist executive decisions. In addition, the evaluation process performed in this manner allowed for benchmarking and collation of data throughout the state which will be valuable for future projects.

Some of the challenges with site’s working relationship with the external evaluator included:
• The evaluation tool was time consuming to complete, taking away from clinical care
• Changes to the data collection tool. The changes to the tool was a result of PwC’s delayed commencement combined with the need commence data collection no later than September 2014 which lead to an incomplete data collection tool at launch and limited orientation for the end user. Both these factors meant changes to the tool were necessary during the project.
• A delayed ethics application for some sites resulted in a slippage of project timelines and the delayed delivery of the data collection tools from PwC was a significant contributing factor.
• PwC lacked the clinical knowledgepecific knowledge of the model of care at sites which impacted the timely development of data collection tools and PwC’s initial interpretation of results.

c) Ethics
All sites obtained ethics approval for the purpose of data collection and evaluation. Nine of the implementation sites were assessed as requiring a low risk ethics application and the remaining three were only required to submit a quality assurance application.

Only three implementation sites did not experience difficulty obtaining ethics approval for the project evaluation. Key contributors to challenges faced by the other sites included a lack of understanding of requirements by ethics, delays in developing data collection tools and communication issues. Feedback indicated commencing the ethics application process early with a clear explanation to Ethics Committees that the application was for a low risk service evaluation and not a clinical trial was a key learning from the project. Using previously successful ethics applications as a guide assisted two sites.

d) Key Learnings

Key Learnings identified by Implementation Sites
In establishing an AMP service the key learning identified by 11 sites (one site did not respond) can be grouped in five broad themes as illustrated in
Overall the feedback indicated the importance of communication that was regular, well timed and tailored to the needs of the stakeholder group. As indicated by one site:

“The greatest enabler is having good relationships with and support from stakeholders. I have been able to meet continuously with our stakeholders to learn from, develop and refine the service.”

The importance of developing effective systems and processes was a key learning for six of the 12 sites. This learning highlighted the importance of:

- Understanding current processes and resources to develop a clearly identified need for the service for initial direction and to gain support
- Engaging subject matter experts early e.g. IT departments to establish booking and administration systems
- Developing a robust clinical governance structure prior to implementation to build clinician confidence and support from orthopaedics
- Establishing a project management team including the steering committee and working groups.
- Local systems that are clear, set-up and robust.

During implementation three sites valued ramping up the clinic throughput over a period of time. Sites found this provided time to:

- Increase the skill level of staff
- Identify and respond to operational issues before reaching a higher percentage of capacity

One site remarked:

“Plan a build-up, don’t attempt to implement at full capacity – without doubt there will be teething issues that will take some time to iron out, and plenty of learning experiences that will guide the refinement of the service”.

As a general observation, sites that implemented services with a higher clinical capacity often found the non-clinical project requirements challenging compared to sites that had lower clinical capacity and
allocated resources to supporting the other requirements of the project. The importance of allocating enough resources to the non-clinical requirements of the project was emphasised by the lead sites, particularly in relation to the AMP CEF and the data collection. However there were still sites that underestimated the time commitments required by the project as indicated by the response from one of the physiotherapists:

“Workload to complete management & credentialing tasks higher than initial expectations”, and “Inputs for data collection was time intensive and different to previous experience”.

Key learnings of Lead Sites

Although all three lead sites had well-established AMP services in place at their organisations, being a lead site supporting other hospital networks was quite a different experience. Throughout the duration of the project there were a number of key learnings for the lead sites. These key learnings included appreciation of the importance of:

- Early development of a communication strategy for all key stakeholders and the value in maintaining this throughout the project
- Early identification of AMPs strengths in project work and their clinical needs
- Early completion of a risk registers by the sites to optimise risk mitigation strategies.
- Early and clear communication of required and desired requirements for recruitment (staff profile: qualifications and experience)
- Reinforcement that obtaining ethics is only for the data collection and analysis as opposed to a clinical trial or implementation of the service. Improving the challenges associated with ethics applications would also be assisted by a document from DHHS providing relevant information and endorsement.
- Ensuring all parties, including the external evaluators, in the project understand the models of care being implemented and the associated intricacies of the data collection required for evaluation at each site
- Encouraging physiotherapy managers of the project sites to provide protected study leave for physiotherapists undertaking the education and training requirements of the AMP CEF to the same extent that is provided when undertaking formal university study
- Recognising the challenge with introducing competency-based training and assessment and engaging the help of staff within the organisation who have completed their Certificate IV Training and Assessment to assist with implementation of the AMP CEF
- Providing realistic expectations of the non-clinical time and support required to complete the project requirements
- Early identification of sites where relationships with stakeholders are less established or stakeholders are less engaged and then accordingly dedicate more time for supporting these sites compared to site where strong relationships already exist.
- Instigating early and frequent reporting of key outcomes so disparities in productivity, capacity and errors associated with data collection tools/reporting can be identified in a timely manner and rectified before project completion
- Aligning tasks to the appropriate staff designation/level of skill to optimise clinic capacity and cost effectiveness. Some models of care required the AMP to complete administration tasks that could otherwise have been patient led or completed by administrative staff. In most cases patient bookings were directed to administrative staff and completion of outcome measures were changed to be patient led during the refinement phase of the project. Sites that didn’t realign tasks to staff designation or level of skill may have not realised their full operational capacity or cost effectiveness.
- Ensure implementation sites confirm the accuracy of data entered and double check all calculations on draft reports to ensure accuracy
- Future projects should consider the benefits of storing data using Access and analysing it using Excel to avoid the breakages to the excel data collection tool experienced by some sites throughout the project.
- Provide a well-documented description of the requirements and comprehensive guidance to assist the external evaluator’s knowledge of AMP models of care.
- Provide additional orientation to the excel data collection tool for end users to mitigate the risk of incorrect data entry.
• Recognise the considerable time required to review and provide constructive feedback in response to the external evaluator’s deliverables. These deliverables include, but is not limited to, the development of key metric data, data collection tools, and the preliminary and final project reports.

Finally, a key learning for all three lead sites was the importance of providing information using a variety of methods and not overestimating the amount of information that can be processed and retained following training days. It was crucial to follow up with the key people to ensure the appropriate information has been received, its significance understood, and passed on to relevant people who were unable to attend the training days.
3. Training and Education

Twenty seven physiotherapists were involved in this project and undertook the AMP CEF competency based training and assessment program.

a) Clinical Education Framework

The AMP CEF was utilised to provide the training, education, and competency assessment requirements for the AMP project. Details of the development, previous implementation and evaluation of the AMP CEF have been published elsewhere. The AMP CEF is underpinned by the DHHS Clinical Governance Framework and addresses the safety and quality domain of ‘an effective workforce’. It also aligns with the Australian Physiotherapy Association position statement that defines advanced scope of practice as:

“role that is within the currently recognised scope of practice for that profession, but that through custom and practice has been performed by other professions and may require additional training as well as significant professional experience and competency development” (Australian Physiotherapy Association 2009).

A key component of the AMP CEF is a competency based training and assessment program conducted in the workplace. The AMP CEF includes a Manual that is generic for all the AMP services, and a Workbook for each specific area of AMP practice which is supported by self-directed learning modules. Implementation sites utilised the workbooks specific to the AMP service they were implementing which included: PAR Clinic, ED, and Orthopaedic, Neurosurgical screening and EDSTIRC workbooks. The workbooks contain the relevant competency standard with additional performance criteria specific to the area of practice, corresponding scope of practice statement, learning needs analysis, assessment tools and other resources required to complete the competency-based training and assessment program.

The pathway to competency is outlined in Figure 3: Advanced Musculoskeletal Physiotherapy pathway to competency in the workplace. The AMP CEF was developed specifically to address the skills and knowledge required by physiotherapist working in AMP roles that have traditionally not been included in the undergraduate physiotherapy degree and the post graduate Masters in Physiotherapy (coursework) degree. A strong recommendation of the CEF is that physiotherapists recruited to work in these roles have met the selection criterion which requires physiotherapists to have enrolled or completed a post graduate Masters in Musculoskeletal Physiotherapy (or equivalent such as Australian Physiotherapy Association Musculoskeletal Physiotherapy Title) and have a minimum of 7 years of clinical experience working in the musculoskeletal physiotherapy area of practice.

Competency based training and assessment is a relatively new concept to physiotherapists. Education and training for the implementation of the AMP CEF was provided at the second training day and assistance was provided by lead sites throughout the project. The majority of survey respondents from the implementation sites found the training provided for implementation of the AMP CEF to be either very effective (6, 46.2%) or moderately effective (4, 30.8%). However the understanding of the AMP CEF improved throughout the project. Towards the end of the project nine sites rated their understanding of the AMP CEF ‘extremely well’ or ‘very well’. This is in contrast to an anonymous survey conducted eight months earlier, in which most respondents reported (8, 66.7%) rated their understanding of the CEF as ‘moderately well’, and only a few rated as ‘very well’ (3, 25%)(Figure 4). The improvement in understanding the AMP CEF over time should be a consideration for new services implementing the AMP CEF for the first time. It is recommended the assistance of an appropriate staff member, within the organisation, who has completed the Certificate IV in Training and Assessment be sought to aid implementation of the competency based training and assessment program of the AMP CEF.

The AMP CEF is designed so modifications can be made to meet the individual requirements of the physiotherapist and health service. However, utilising this flexibility without compromising the integrity of the framework relied upon a good understanding of the framework. Any changes that were made needed to be clearly documented and agreed upon by relevant stakeholders. All sites were required to benchmark performance using the same competency standard specific to the AMP service. All services implemented either all (3, 23.1%) or most (10, 76.9%) of the framework. Examples of the modifications to
the framework made by sites included removing areas not relevant to their practice such as wounds and diabetes, and adding additional assessment requirements.

Figure 3: Advanced Musculoskeletal Physiotherapy pathway to competency in the work-place
The AMP CEF was accessible to sites via the Victorian DHHS website. All training and education resources were uploaded for sites to access. This included self-directed learning modules, radiology learning packages, examples of case presentations and other learning materials. Guidance and training for implementation of the AMP CEF provided by lead sites included:

- Site visits by physiotherapists from implementation sites to observe lead site clinics in operation
- Visits by lead site physiotherapists to implementation sites to assist with completion of learning needs analysis and completion of competency assessment tasks
- Examples of lead sites case presentations provided in newsletters, training days and webinars
- Assessment of radiology tasks and case presentations remotely by lead sites

In addition to support from the lead sites, implementation of the AMP CEF relied upon sites having access within their own organisations to appropriate assessors available to conduct the competency assessments and mentors to guide the physiotherapists with their learning and assessment plans. The level and type involvement of the medical specialist in the assessment of the AMP’s competency varied between sites. However most sites reported they either strongly agreed (2, 15.4%) or agreed (8, 61.5%) that the involvement of the specialist was adequate. Sites reported the in-kind support came from orthopaedics, radiology, out-patient admin and nursing support. The in-kind support received by sites was considered adequate with only two services indicating it was inadequate.

b) Project Training Days – feedback and description

A total of four project training days and one final meeting day were held during the 18 month AMP project period to disseminate information and resources, facilitate networking and promote sharing of idea and provide opportunity for trouble-shooting challenges. Each training day was held and led by DHHS and each session was led by the DHHS, lead sites or PWC as the external evaluator.

Implementation sites were asked via the anonymous survey completed in May 2015 and via the final written report to reflect on their experience and provide feedback regarding how relevant and useful the training days were. The majority of respondents either strongly agreed or agreed the training days were useful and relevant.

The focus of each training day and qualitative feedback taken from the sites final report is detailed in Appendix A. The key theme that emerged from the reports regarding the training days was the value of networking with others, sharing of information, and having the opportunity to discuss their models of care, details regarding their evaluation, challenges and barriers face to face with other sites, lead sites and evaluators. The training days were of more value to sites that had no prior or minimal experience with implementing AMP services as indicated by the comment from one physiotherapist:

“Different sites at different levels of progress limited outcomes from training days”.

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**Figure 4: Physiotherapists understanding of AMP CEF comparing September 2014 with May 2015**

![Bar chart showing understanding of AMP CEF comparing September 2014 with May 2015]
The feedback highlighted the importance of ensuring the right people attend the training days and that key information required for the project is well understood and passed on where required. For example the need to complete an ethics application was discussed and emphasised by the lead sites in Training day 1 and 2, yet there was a comment from a physiotherapist who attended Training day 3 and had not attended prior training days that this was the:

“First concrete indication of ethics requirement at site level – felt this was too late”.

c) Challenges and Barriers

Nearly all sites identified the main challenge with the training and education requirements were finding the time to complete the AMP CEF. Unlike a formal university qualification where education and training generally occurs off site and is quarantined with allocated study leave, the competency based training and assessment program is conducted on site and often formal study leave is not allocated. Prioritising the time to complete the program was difficult, particularly for physiotherapists working part-time and/or for those physiotherapists who were project managers as well as clinicians. Most sites, with the exception of two, had to become familiar with the methodology of the AMP CEF for the first time. Challenges identified by physiotherapists included: “Knowing where to start” and “getting to grips with the forms required to complete the assessment”.

Interestingly, the two sites who were familiar with the AMP CEF reported implementing the AMP CEF for the second time was considerably easier even though it was for a different AMP service. (See Appendix B for further detail regarding the challenges and barriers of implementing the AMP CEF).

The competency based training and assessment program requires completion of a documentation trail that provides evidence of the attainment of competency via various methods of assessment. Assessment is an important component in addition to the training – finding time to do both was challenging for some sites. As one physiotherapist indicated:

“The main challenge was finding the time to undertake the tasks for the learning, and also the time to schedule and conduct relevant assessments”.

Gaining access to assessors was challenging particularly for smaller regional/rural sites. Many of the orthopaedic consultants worked part-time so it was difficult for them to find the time to be involved in competency assessments such as workplace observations. Lead sites provided assessors to a number of sites to assist with the assessment of competency.

Whilst understanding how to implement the AMP CEF was considered challenging, sites were able to appreciate the strengths of the AMP CEF. The detailed, comprehensive content and flexible structure of the AMP CEF was considered strength, as was the potential consistency and transferability it provided between sites. The resources of the AMP CEF, particularly the PAR radiology resources were considered helpful and essential.

Sites were asked to provide areas for improvement of the AMP CEF. These suggestions included the following:

- Simplify layout and avoid repetition in learning modules
- Easier access to resources and opportunities to share resources between sites
- Inclusion of specific examples for pathology/pharmacology cases relevant to all AMP areas
- Free access to the APA Diabetes modules
- Add a component on medical documentation and letter writing
- Acknowledgement of prior learning
- Dividing workbook up into individual documents

The provision of education and training to support the implementation of AMP services is not without its challenges. However, the indication from sites involved suggest training days and the AMP CEF were integral in achieving successful implementation and ensuring we have a competent and effective workforce capable of providing high quality and safe AMP services into the future.
4. Key Achievements

It is important to note this report should be reviewed in conjunction with PwC final report\textsuperscript{12} that contains a detail analysis of the final project outcomes. This section summarizes the key achievements from the perspectives of the implementation sites and lead sites. Information has been gathered from PwC reports, anonymous survey results and final progress report submitted by sites in late May 2015.

a) Implementation Sites

The future is promising for the delivery of AMP service with 10 out of the 13 AMP services having received interim funding to continue, with two of these 10 sites securing ongoing funding. At least four other sites have received indication from management that their services will be ongoing whilst the remaining sites await the outcomes from their business cases. A summary of all the key outcomes from the 13 AMP services is provided in Appendix.

A total of 27 physiotherapists undertook the competency based training and assessment program. At most sites there were 2-3 physiotherapists who completed their competency requirements. This is positive for the future sustainability of these roles and avoids the risk associated with a silo model of care where there is only one person trained in the organisation to do the role.

The top three process achievements and key themes that emerged from all sites are represented in
Figure 5. The strengthening of internal relationships within the organisation, particularly with medical stakeholders and physiotherapy, was a major theme and a crucial component for successful implementation.

"Key stakeholder involvement and building of the relationship between physiotherapy and orthopaedics – this has created a significant improvement in the orthopaedic department’s understanding of the knowledge and skills of the physiotherapists, and their confidence in the AMPs abilities. It has also led to the orthopaedic department putting forth ideas for other AMP services, and driving the process of applying to implement such services”

(Project Lead Physiotherapist)
Figure 5: Top Three Achievements of Implementation Sites

Improving quality of care and the patient journey were key achievements, as evident in the themes relating to patient satisfaction, increased throughput and service improvements for patients:

“Previous follow up by the organisation was identified as an area that could be improved. The PAR clinic has added structure as well as improved quality by utilising and recording functional measures which allow better evaluation of individual clients and the service as a whole. This was achieved without increasing the risk to the patients or staff.” (PAR Physiotherapist)

A number of sites noted successfully implementing a new model of care as a key achievement. Two sites implemented their first AMP service. Up skilling physiotherapists and building capacity within the physiotherapy department and achieving sustainability was also considered an important achievement.

Due to the varying models of care being implemented, the objectives and achievements varied between sites. Key achievements of the sites according to the four models of care (PAR, ED, EDSTIRC, and Neurosurgical Screening) have been collated and described below.

Post Arthroplasty Review Clinics
At most sites the number of joint replacement surgeries conducted annually was increasing, resulting in an increase in demand for orthopaedic outpatient appointments and consequently longer waiting times for appointments. Hence a key objective was to implement a model of care that contributed to reducing this burden. This project has demonstrated that an innovative AMP model of care costs $36 less per occasion of service less than the traditional model12 (also refer to Appendix).

No clinical adverse events were reported across all 2362 patients from all PAR sites. There was one Riskman incident relating to an administrative booking error that was quickly resolved by amending the administrative practice. Another complaint reported was in the early stages of service implementation relating to the new clinic processes.

There are difficulties comparing results between sites due to a number of variables such as different models of care, limitations with space impacting capacity of services, sample sizes of surveys completed etc. A snapshot of outcomes taken over an 10 month time frame collated from the PwC final reports are summarised below (refer to Appendix for more information):

- Capacity of services ranged from 66-316 available appointments at each site
- Average attendance rate was 87%
- A range of 37-188 occasions of service occurred at each site
- 54-100% of workforce satisfied they had a good understanding of the scope of practice of the AMP and their role
- 85-100% of patients surveyed were satisfied with the care they received from the PAR physiotherapist
- The reoccurring mean cost for an AMP occasion of service was $58 (range $40-77)
- Average time saved by specialist per OOS was 15 minutes (7-28 minutes) which equates to the value of time saved per OOS to be on average $37 (range $23-64). Total savings expected over a 12 month period are $74,904 over all sites12

There were two regional/rural sites where a private/public model of care was utilised. Patients at these sites would present to the surgeon’s private rooms for follow up. At one site, pre project implementation patients would often present back to the ED rather than the surgeon’s private rooms, shifting the demand back on the hospital. During the baseline pre-implementation period, data indicated 19% of patients (16 of 83) who underwent primary arthroplasty represented to the ED within the 6 week post-operative period. This reduced during the project implementation period to 8% (9 of 130). Of the nine patients who represented to ED during the project implementation, only four patients represented after they had been to the PAR clinic, with three of these patients presenting for medical conditions unrelated to their surgery. The potential cost savings associated with reducing ED representations equated to $22490 over the 9 month period or $2499 per month, a significant achievement for this site.
One of the metropolitan sites were able to demonstrate their PAR clinic reduced the need for manipulation under anaesthetic for patients following knee arthroplasty surgery by 7.5% (30 MUAs), resulting in a potential cost savings of $237,600 (Assuming average cost of a MUA is $8,000).

There was mixed success with reducing waiting times for appointments and increasing throughput of the orthopaedic outpatient clinic. In most hospitals, waiting lists include patients with all orthopaedic conditions and not just those who have had arthroplasty surgery. Access to reliable data from complex hospital information systems to establish baseline data also proved to be difficult for several sites, impacting on the outcomes that could be reported. Furthermore, there were many other variables independent of the PAR clinics, such as changes in medical staffing, making it challenging to demonstrate a causal effect from the introduction of PAR clinics on waiting lists and waiting times from referral to first appointment.

However one site was able to reduce the number of patients on the ‘to-be-booked’ waiting list by 344 patients (33%). Another site demonstrated 3.5% more ‘new’ orthopaedic appointments were created and a further site recorded an additional 167 new patients and 125 review patients were seen by an orthopaedic specialist during the project period compared to the baseline period. One of the two sites that were unable to show a reduction in the outpatient waiting list had a concurrent 82% increase in the number of hip and knee surgeries performed over the project period, and whilst waiting times had not decreased, they had neither increased either which was a promising indicator. Attendance rates to the PAR clinic were excellent overall. One site reported 100% attendance rate for their PAR clinic, whilst other sites reported a DNA rate was around 6–6.5%, which is less than the baseline of 10% for orthopaedic clinics.

Sites identified that one of the key objectives in implementing a PAR clinic was to standardise the pathway for routine follow up in post-operative care of patients following surgery with routine scheduled review appointments in accordance with the Australian Orthopaedic Association guideline. There was variation between when these review points occurred as described earlier in this report, however this was primarily determined by the implementation site’s orthopaedic director. There was a 16% increase in patients meeting their post arthroplasty review times and all reported improvements relative to the baseline period. One site reported a 30-40% improvement, and another site reported 88% of patients 12 month reviews were seen on time compared to 10% at baseline.

Prior to the AMP project implementation, it was identified that routine practice did not include the use of validated patient outcome measures, and communication back to the GP was inconsistent. All sites had success with the introduction of self-reported patient outcome measures and written communication with the GP. Patient outcome measures were collected in 83-100% of patients and 89-100% of patients had a letter sent to their GP. All sites regarded this as a key achievement of the project as it promoted improvements in clinical practice by providing standardised objective patient outcomes and future opportunities for research and quality improvements.

Across all sites implementing a PAR clinic, 88-100% of patients surveyed were satisfied/very satisfied with the care they received from the physiotherapist. There were some variable results from the workforce satisfaction survey with 54-100% of the workforce survey reporting they had a good/very good understanding of the AMP role. It was evident some sites required further work in educating stakeholders regarding the role and scope of practice. Further detail regarding satisfaction results and survey responses is included in the external evaluators report.

A key achievement for several sites was the completion of the competency requirements and the progression of a model of care whereby the physiotherapist was given more autonomy. At the start of the project the physiotherapists had to liaise with medical specialists regarding every patient whilst the patient was still in the room. Following the completion of the competency requirements the medical specialists at some sites were confident for physiotherapists to either liaise with them only patients of concern or discuss at the end of the clinic. These changes to the model of care improved the efficiency of the clinic for these sites.
**Executive Summary**

**Emergency Department Soft Tissue Injury Review Clinic**
For the one metropolitan site that implemented the EDSTIC, wait times for an orthopaedic Fracture Clinic appointment or an Orthopaedic Consultant Clinic reduced by 6 and 73 days respectively after the introduction of the EDSTRIC. The average wait time for an appointment in the EDSTRIC was just 10 days. This improvement in access to expert care for patients discharged from ED following acute musculoskeletal injury was a key objective of the EDSTRIC.

Improvements in quality of care were also demonstrated by an increased prevalence of evidence-based management (i.e. adherence to accepted guidelines for best practice determined by a retrospective clinical audit) for knee injuries by 24% (from 33% to 57%) and shoulder dislocations by 37% (from 37% to 73%). Critical to this endeavour was the formulation of management protocols in consultation with the Orthopaedic Consultants and an effective communication strategy with the treating Emergency staff.

Overall the satisfaction levels were extremely high. Almost all patients surveyed (43, 98%) were very satisfied/satisfied with the service provided by the EDSTIRC. Ninety two per cent of staff surveyed (12, 22% response rate) felt they had a good understanding of the AMP and their role and 100% of Orthopaedic Consultants surveyed were satisfied with the level of competence and quality of assessment provided by the AMPs.

**AMP in the ED (Rural/Regional)**
Introduction of an experienced musculoskeletal physiotherapist in an AMP primary contact role at a rural hospital provided patient focused care for patients with musculoskeletal presentations at peak times, including planned representations after the weekend when there were reduced radiology services (38% of all AMP services) and peak demand weekends (e.g. Australia Day, Easter).

Two AMPs undertook the training process. Only 5% of patients managed by the AMP needed to be handed over to the medical staff. Thirty per cent of patients commenced early active rehabilitation in the ED and 25% of all patients had a diagnosis appropriate for direct referral to outpatient physiotherapy services.

Relationship building in the ED between physiotherapy department staff and nursing and medical staff created an interdisciplinary team of health professionals reflected by a positive staff outlook on the AMP model and its ability to improve patient care. The project has allowed for multiple opportunities to share learning across disciplines in the ED. Implementation of the ED AMP has resulted in informal case based learning and discussion and contribution to medical officer training which have been of significant benefit.

Successful establishment of the first AMP role in this sub-regional health service included:
- External recruitment of local private practice physiotherapist with extensive musculoskeletal clinical experience has been employed as the second AMP in ED, facilitating sharing of knowledge.
- Networks established with other professionals within health service and Victoria more widely
- Links formed with larger hospital AMP services
- Succession plan using the existing physiotherapy department workforce
- AMP OF and CEF was embedded for this service and future AMP services
- Extensive learning opportunities for all stakeholders: clinical, ethics and project management

**Neurosurgery Screening Clinic (Metropolitan)**
Achievements at this site included the removal of 260 patients with spinal pain from the waiting list, some of whom had waited more than 800 days. Of the patients seen, 84% were new patients. At the end of the project the Neurosurgery Screening Clinic waiting list was in excess of 1,200 patients with approximately 100 new referrals per month. Capacity in the clinic was 97%. Of those seen, 87% of 134 patients did not require an appointment with the Neurosurgeon. This enabled increased access to the neurosurgeon for surgical care for urgent patients.

Expansion of the clinics has enabled a highly skilled AMP team to meet more regularly to exchange ideas and complete parts of the learning and assessment pathway. External engagement with the larger
AMP “community” has had benefits of networking and gaining significant skills and knowledge at clinical, operational and strategic levels. This project has supported maintenance of excellent stakeholder support through multiple clinician and managerial changes (both physiotherapy and medical) and in the varied hospital environment.

b) Lead Sites
The model of using lead sites as part of the project framework allowed a streamlined establishment of services across 12 healthcare networks. This was a key driver of efficiencies in the set-up, development, refinement and evaluation of services.

The three lead sites role has been fulfilled in providing mentoring required for successful implementation of AMP services at implementation sites with good clinical governance. This has been demonstrated by the achievement of the following:

- Directing project objectives at achieving patient-centred care and including the participation of patients in the evaluation process
- Identification of risks early in the project and implementing mitigating strategies
  - Sites were required to develop a risk register and clinical governance policy
- Ensuring effective AMP workforce for this project via the AMP CEF and additional resources provided by lead sites and the completion of the competency based training and assessment
- Achieving clinical effectiveness by supporting sites with the implementation and monitoring of quality and safety indicators throughout the duration of the project.
- Support provided to the DHHS in coordination and set up of project parameters and key frameworks for operational requirements, clinical education, evaluation, and overarching project governance

In addition to overseeing good clinical governance, the lead sites also:

- Brought clinical expertise to the interplay between the DHHS and PwC to design and implement the evaluation framework of the project
- Facilitated an integrated, collaborative approach to the implementation of AMP services in partnership with the DHHS and PwC
- Developed insight into the healthcare services in Victoria for future state wide innovation reform through sharing of learnings of healthcare networks' processes, infrastructure and key challenges
- Streamlined communication especially relevant in a large multicenter project
- Facilitated collaboration with other rural, regional and tertiary hospitals, through direct working relationships with AMP physiotherapists, managers and allied health directors
- Were the key driver ensuring main project objectives and responsibilities were met, and completed at set time points
- Provided an effective resource in the operational and clinical education requirements to Implementation sites as required
- Contributed to and facilitate the succession planning by providing documentation, education and training, support with data collection, business case development and overall guidance across all areas to sites.
5. Impact and Implications

All sites had a significant increase in activity over the project time as measured by the decreasing average time spent for each occasion of service over the data collection period. The lower capacity (low number of patient bookings) reported initially by some services especially within the PAR clinics was due to triage limitations and unfamiliarity of the service by medical, nursing and administration staff. Other factors contributing to the lower capacity included a narrower scope of practice for the physiotherapist and allocation of time required to undertake training and up skilling.

a) Unexpected benefits

Several sites highlighted the positive impact of progressing from consulting with specialists after every patient to instead at the conclusion of the clinic or in some healthcare networks only when AMP assessed it as being necessary. Six (45%) sites reported some change with the method of reviewing patients with specialist.

Other unexpected benefits from being involved in this project reported by implemented sites included:

- The opportunities for shared learning across disciplines
- The organizational interest in AMP roles had led to creation of opportunities for growth of other AMP services.
- One site received a local award for their project.
- The increased level of education that this project provided for AMP staff members.
- The increasing scope of the AMP role in the clinic over the course of the project and the heightened recognition of skills sets of AMP’s.
- Experience gained in ethics processes bringing relationships and knowledge for future projects/research.

b) Unexpected Challenges

Many sites found it difficult to influence administrative bookings systems which resulted in fluctuations in clinic numbers. This was further complicated by changes in surgical activity.

One third of sites underestimated time involved to fully engage key stakeholders. This was sometimes due to availability of stakeholders or changes in staffing. One smaller site had experienced some challenges with consumer engagement, as they were used to a previous model. Changes of AMP staff, including unplanned absences, resignations or delayed recruitment presented challenges for some.

c) Future directions

At the time of this report, 10 sites have secured ongoing funding with many hospitals indicating a good chance of success. The cost efficiency data provided by PwC in the preliminary report was utilised in many business cases as it was identified as a key driver for interest at executive level. One organisation was successful at securing funding as they were able to demonstrate that a PAR clinic could result in more available surgeon time to operate. Two rural hospitals are exploring privately funded models. Several business cases requested further funding to expand their AMP service, both in number of staff and new models of care such as Telehealth.

Improved workforce supply is a strong focus, with introduction of additional AMP staff into clinics and commencement of the recently established AMP competency training for these staff members. All sites indicated a strong interest in their staff pool for future involvement within AMP services.

The rural networks expressed interest in furthering their relationships with other regional centres for professional development opportunities, expansion of services and direct engagement as well as continuing to build relationships with experienced private physiotherapists interested in AMP roles. These private practitioners have experience, post graduate training, workforce stability and interest to be involved. However this will require a dedicated funding source, as physiotherapy time and redirection of resources from within the public health service is less available to them.
The larger tertiary hospitals appear to have appropriate staff available from within their organizations to draw upon. In some of the larger healthcare networks succession planning to ensure sustainability emphasised:

- Professional development and training of existing staff
- “Cross training” into these roles from other AMP clinics
- Start at a junior level e.g. by sharing experiences at meetings, mentorship programs

Other intended future directions with AMP roles include:

- **Data Collection tool**: it was suggested by several hospitals that the data collection tool would be modified to support a time efficient, effective and useful tool. No conclusions from end of project implementation site feedback could be drawn at this stage as to whether the data collection tool used in this project would be continued to be used in its same or modified format.

- **Expansion**: Several sites outlined plans to expand the PARs clinic. This included number of clinicians in the clinic, review dates and type of patients seen. One regional service, for example, plan to include other surgical reviews within the overall clinic structure. Another will increase the number of surgeons involved in the clinic using a private funding model. A metropolitan site is exploring the idea of increasing outcomes by group assessment and further reviewing the role and determining if any specific areas can be performed by AHA level of expertise.

- **New AMP clinic initiatives**: Most of the hospitals reported intentions to increase their AMP clinic portfolio to reflect the issues and challenges within individual networks. For example, large numbers of patients are waiting excessive time for initial specialist assessment. Some hospitals had secured some funding through the most recent DHHS innovation Allied Health advanced scope grant and were in planning phase, while others had concept ideas of the need and were to start conversations with their medical departments/executive for a plan for the future. The main areas of focus are women’s health, paediatrics, rheumatology, specialised areas of orthopaedics such as ankle, shoulder and knee, and other post-surgical reviews.

- **Telehealth**: Three of the participating healthcare networks intend to review or are currently piloting the role of Telehealth as part of the review process in AMP PAR clinics. There appears to be extensive interest and need for this model of care to be explored as the clinics develop and embed within the normal healthcare service delivery.

- **Teaching and training**: Most hospitals reported a plan to use the now established PAR clinic environment to up-skill less experienced staff utilizing a version of the clinical framework with credentialed AMP clinicians providing supervision.

- **Competency Framework**: All sites acknowledged the value in utilising the AMP CEF to foster a high quality, efficient and effective health service. Now that many sites have completed the AMP CEFF in full as part of this AMP DHHS project, individual streamlining and refinement was seen as important to reflect their own workplace and practice. There was a suggestion to increase more online assessments particular for sites that had limited staff available to assess.

**d) Succession Planning**

Succession planning is an important factor in maintaining the delivery of the AMP services into the future. The enablers and barriers to succession planning described by implementation sites are listed in Error! Reference source not found.
**Table 1: Enablers and barriers encountered during succession planning**

<table>
<thead>
<tr>
<th>Enablers for succession planning</th>
<th>Barriers for succession planning</th>
</tr>
</thead>
</table>
| Support: (existing already or developed through the AMP project)  
  • Steering committee  
  • Clinical champions  
  • Executive and Allied Health director | Limited funding opportunities will be a challenge to secure ongoing funding |
| Support and agreement of the health services to employ private practitioners | Backfill and space: the capacity to meet and expand clinics within current staffing and infrastructure may be limited and effect other physiotherapy services e.g. a clinic utilizing physiotherapy department space limits available space for outpatient services |
| Mentor site guidance | Space limitations: especially when trying to co-locate with specialist clinics. |
| Interest of physiotherapists to undertake these roles | A lack of Information Technology support for collection of data, reporting and operation of clinic can affect the efficiency of the service and outcomes. |
| Radiology support | High staff turnover can increase cost and lower efficiency of clinic |
| Significant demand: organizational need for clinic to assist to meet government and hospital key performance indicators | Time and cost commitments to organization and staff in training for AMP roles. |
| Existing experienced staff within the hospital who can be mentored and supported by senior staff | Ensuring AMP staff are continually challenged to work at the full scope of practice |
| High patient satisfaction | Appointing staff external to the organization for short inflexible shift times. |
| Research data being collected which is more extensive than in the traditional model of care | Small regional hospitals often have less experienced staffing or number of interested staff to provide extra clinics. |
| Employing physiotherapists from other organizations that have already undertaken the AMP competency framework | Different funding models such as incorporating private funding are more complicated and often restrictive to these clinics. |
| Comprehensive clinical governance structure | Ongoing medical support and interest in the AMP roles particularly if the need to the specific department and organization is not being meet. |
6. Conclusion

The number and demand of patients with musculoskeletal conditions requiring hospital health care services is expected to rise considerably. The AMP implementation project implemented a state-wide innovative model of care of AMP services in a variety of musculoskeletal clinical areas across 12 public health services in Victoria. The project outcomes provide evidence that state-wide innovation and alternative models of safe, effective and efficient care can be achieved using a mentor lead site and implementation site model combined with a reputable external evaluator. AMP services are an innovative method of increasing capacity in the Victorian public health system using an existing workforce to manage the rising burden of patients with musculoskeletal conditions. Metropolitan, rural and regional services were represented and in excess of 3,000 occasions of service were evaluated.

This project has demonstrated AMP services are safe, effective and cost efficient when compared to traditional models of care. AMP services have been embraced by the patients, staff and stakeholders as improvements to access care were demonstrated and the patient journey enhanced. The successful collaboration with medical specialities indicates the capacity of AMP services to reduce the burden on the medical teams was realised.

Through this project, the necessary resources and support for AMP services have been embedded state-wide to ensure the key safety and quality domains of good clinical governance. In doing so, an engaged, collaborative and effective physiotherapy workforce across Victoria has emerged to support the sustainability of AMP services into the future. Evidence indicates this emerging workforce predominantly includes experienced physiotherapists with relevant post-graduate qualifications and supports the recruitment of experienced physiotherapists from private practice.

Wider implementation and ongoing sustainability of AMP roles beyond this project will be challenging in a competitive health care funding environment. However the early success of sites securing ongoing funding is promising. This project has provided the necessary elements required to underpin a strong, convincing business case for ongoing funding of AMP services. Implementation sites have prospered from the opportunity to establish the robust operational requirements and good clinical governance of AMP services. This has achieved engagement and endorsement of key stakeholders, promoted comprehensive training and competency assessment of physiotherapists, and clearly demonstrated the value of implementing AMP services for the patient, staff, healthcare organisation and broader health care community.
7. Key Recommendations

AMP is a proven innovative clinical model of care for outpatients and emergency departments in a variety of healthcare settings. The governance, operational and clinical education frameworks underpinning AMP models are now well established in most Victorian public hospitals. Further efficiencies for expansion of existing and subsequent new AMP services should be realised and capitalised on. Experienced physiotherapists now have a pathway to achieve full competency, supported by a competency based training and assessment framework. This has resulted in formation of a capable workforce which has further potential to improve patient outcomes and the efficiency and cost effectiveness of service delivery.

The key recommendations to maximise impact of AMP services to increase capacity on health service provision are:

- Key decision makers of health care services should capitalise on the evidence found within this AMP project and consider ongoing funding for the continuation of AMP models implemented in this project. This is crucial to maintain the momentum of the outcomes achieved to date.
- AMP models should be expanded further to increase throughput in outpatient clinics
- AMP models are best embedded into normal clinical care and are maximally efficient, effective and sustainable if operating within, rather than in parallel, to the main delivery of service
- AMP models should be aligned with broader health care priorities of Victorian public hospitals and the Victorian DHHS. AMP models should be considered as part of workforce reform for key priority outpatient areas identified by each health service.
- Increasing the critical mass of physiotherapists undertaking the competency based training and assessment program should be encouraged to enhance sustainability and transferability of this newly acquired clinical expertise between organisations.
- Publication of models of care and outcomes in AMP services in peer-reviewed journals are strongly encouraged to highlight the benefits and gain broader professional acceptance and support
- Telehealth should be considered to further enhance efficiency and improve patient care especially in the AMP post arthroplasty model. Whilst pilot projects are in their infancy, early indications suggest this model of care can reduce costs to hospital and patient. This model should be further evaluated to determine how best it can be delivered within the PAR model of care.
- Wide use of validated patient outcome measures in the PAR population should be utilised in multicentre research projects to develop predictive tools in collaboration with medical teams for identification of patients at risk of achieving good outcomes. This would contribute to stratified care.
- Efficiencies of AMP models could be further enhanced by removal of legislative barriers that currently impede practice and restrict physiotherapists from:
  - ordering diagnostic investigations, such as imaging and pathology
  - prescribing simple medications needs of patients with musculoskeletal conditions
  - signing of initial Worksafe certificates

This project has demonstrated the AMP CEF can successfully provide the training and competency assessment of physiotherapists working in AMP roles across a diverse range of hospital settings extending from large metropolitan hospital to smaller rural hospital. Recommendations when implementing the AMP CEF for AMP roles include:

- Provision of study leave for clinicians undertaking the competency training and assessment program.
- Physiotherapists tailor training and competency requirements according to individual learning needs, the model of care and specific organisational policy and procedures
- A staff member with a Certificate IV Training and Assessment be engaged to assist with implementation and documentation associated with competency training and assessment.
- An overview should be used with the AMP CEF to help simplify the process involved
- Consideration that provision of in-kind support for training and assessment provided by orthopaedic, neurosurgical, and emergency departments could be balanced with information
relating to their patients attending AMP services collected via the validate patient outcomes measures.

- Consideration is given to establishment of a Victoria wide network of assessors to assist smaller hospitals with competency assessments is recommended.

The key recommendations to support effective future advanced practice projects are:

- Inclusion of an external and well-respected accounting firm such as PwC is recommended for project evaluation. The outcomes focusing on costs, efficiency and effectiveness strengthen business cases presented to individual hospital executive. It is expected that this will result in a higher success rate for financial support of the AMP clinics. However it is strongly recommended that a clinically experienced project lead team is appointed to direct and advise on project deliverables.

- Future projects requiring ethics should be more streamlined and efficient by provision of clear guidelines and an overarching summary from DHHS documenting the project objectives and required analysis to enhance the submissions at individual sites.

- Lead and implementation site project model is recommended to assist with meeting project timelines and evaluation.

- Ongoing engagement and communication with stakeholders should be encouraged so that the full scope of practice of the AMP is well understood and realised.

- A robust and superior data collection tool be utilised to maximise efficiency and effectiveness in measurement of outcomes with consideration given to the advantages of collecting data using Microsoft Access and analysis in Microsoft Excel.
References


### Appendix A: Details of Training days held at the Victorian Department of Health and Human Services

<table>
<thead>
<tr>
<th>Date</th>
<th>Agenda Items</th>
<th>Feedback from sites</th>
</tr>
</thead>
</table>
| **Training Day 1:**  
13\(^{th}\) December 2013 | • Introduction  
  o roles & responsibilities  
  o competency based training & assessment  
  o terminology  
• Lead sites models of care  
• Change management strategies & Stakeholder engagement  
• Operational framework | • Would have been useful to spend time working on own models of care with mentor sites  
• Good introduction & rationale for project  
• Beneficial information in planning stages  
• Opportunity to meet with mentor and other sites – establish relationships  
• Group discussion regarding recruitment reinforced initiatives already undertaken  
• Provided more detailed overview of amount of work required as part of project commitment  
• Some repetition for sites already with AMP roles  
• Presentations on models of care helpful  
• Presentation of VIRIAF good intro to planning data collection – would have been good to go back & refresh at Training day 3 |
| **Training Day 2:**  
14\(^{th}\) February 2014 | • Process of developing operational guidelines, clinical governance policy & key factors to consider.  
• Introduction to the Clinical Education Framework including the self-directed learning modules including the radiology learning packages, Learning & Assessment Plan & the competency assessment tools.  
• Ethics | • Written & practical examples helped with understanding the operational & CEF  
• Volume of information enormous & hard to follow at times  
• PAR radiology modules outstanding  
• CEF was clearly presented & comprehensive  
• Relevant examples of case presentation based assessments  
• Clarified complexities of CEF  
• Opportunity to use assessment tools highlighted how competency can be assessed in different ways  
• Useful for networking & gave insight how other sites progressing  
• Useful to go over learning modules & framework  
• Workload to complete management & credentialing tasks higher than initial expectations  
• Appreciated the identify the areas to up skill rather than to complete all of the package  
• Extremely helpful to be given examples of operational guidelines, clinical governance & risk registers  
• Intro to CEF is excellent part of the process |
| **Training Day 3:**  
20\(^{th}\) June 2014 | • Introduction to the evaluation, proposed timelines, specific | • Much of focus of day not relevant to model (not PAR)  
• Valuable to meet with evaluators – 1:1 contact may have been more useful |
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<tr>
<th>Date</th>
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<th>Feedback from sites</th>
</tr>
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</table>
|      | indicators of success, data collection & availability  
  • Enablers & barriers. | Considerable time taken to educate evaluators  
  • Not clear how evaluation was going to work  
  • Good opportunity to network with other sites  
  • Would have been more efficient if evaluator had understanding of data to be collected prior  
  • Didn’t have enough input into what data we’d like to collect as we probably didn’t fully understand that yet  
  • Good to develop data metrics together so that data can be compared  
  • First concrete indication of ethics requirement at site level – felt this was too late  
  • Positive session that raised awareness of skills required to build sustainability  
  • Inputs for data collection time intensive and different to previous experience  
  • One on one session with mentors more useful than these training days  
  • Good to meet with PwC & build rapport with them  
  • Assistance with ethics was invaluable in reducing time to complete the process at own site |}

Training Day 4:  
14th November 2014
|  | Business case development including:  
  o examples of business cases,  
  o the type & depth of relevant data to include,  
  o engaging decision makers  
  o aligning your business case with the hospital’s strategic direction. | Examples of business cases useful  
  • Appreciated experiences/strategies of mentor sites  
  • Effectively highlighted important areas and examples to include for business cases  
  • Not a lot was gained except the examples of business cases were handy  
  • Highlighted the need to focus on business case early and engage effectively with key decision makers  
  • Useful benchmarking  
  • Useful to have breaks to discuss challenges with data collection with evaluators & mentor sites  
  • Business cases were invaluable when it came time to write up own  
  • Needed to cement parameters as time consuming to have to change database |}

Final Project Meeting:  
12th June 2015
|  | Radiology Assessment Task  
  • Summary of project outcomes and findings  
  • Key learnings and reflections  
  • Future directions | General Feedback for all training days:  
  • Needed Wi-Fi  
  • Resources should be distributed prior  
  • Large amounts of paper & duplication  
  • Objective goals of training days should be more explicit  
  • Different sites at different levels of progress limited outcomes from training days | Information compiled from Implementation Sites final progress reports
Appendix B: Feedback from Implementation Sites about the AMP CEF

Information compiled from Implementation Sites final progress reports

<table>
<thead>
<tr>
<th>Site</th>
<th>Challenges and barriers CEF</th>
<th>Strengths</th>
<th>Areas for improvement</th>
<th>is there anything that wasn’t achieved, why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>- Knowing where to start</td>
<td>- Potential consistency across sites</td>
<td>- Layout</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>- Establishing baseline requirements for independent practice</td>
<td>- Portability</td>
<td>- Ease of use</td>
<td></td>
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<tr>
<td></td>
<td>- Recording achievements</td>
<td>- Depth of content</td>
<td>- Timelines</td>
<td></td>
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<tr>
<td>Metro</td>
<td>- The main challenge was the time to undertake the tasks for the learning and then also the timing to schedule and conduct relevant assessment. It is easy to get caught up in the operational requirements and neglect the assessment.</td>
<td>- The modules are extremely thorough and have an excellent range of references.</td>
<td>- Refining the learning package content to make the relevant information easier to access.</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The radiology learning package is extremely well structured.</td>
<td>- The depth of detail in the Pathology package is greater than we need at Monash Health. When new to an area, it can be difficult to know the limitations of the depth of knowledge that is required. We are now in a position to guide training Amps regarding the areas to focus on in this module.</td>
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<td></td>
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<td>- The diabetes modules to be freely available rather than via payment to the APA.</td>
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<tr>
<td>Site</td>
<td>Challenges and barriers CEF</td>
<td>Strengths</td>
<td>Areas for improvement</td>
<td>Is there anything that wasn’t achieved, why</td>
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| Metro     | • Most AMP staff are part time; the clinicians involved in this project work 1 and 2 days per week, which makes it incredibly difficult to get through the volume of work required for the clinical education framework. | • The framework is incredibly detailed and specific and provides a good structure to identify strengths and weaknesses of a variety of clinicians’ experience and expertise | • We have formulated our own summary sheets to give some further direction to the work, as the volume required is overwhelming, and it can be difficult for a new staff member to understand where to begin and what they have completed so far.  
• We also spent quite some time dividing the workbooks into the individual documents as they were mostly only available in the one large document, requiring a search each time an individual document was required.  
• General feedback regarding the amount of reading suggests that having key or essential references for each module would be of benefit, with perhaps the ability to share readings. Large amounts of work have been required to source documents and reading material, which has taken up time that would otherwise have been spent doing module work and progressing through the pathway | PARs still requires case presentation 2/4, WO3/3, oral appraisal, Neurosurgery requires case presentation 1/5, oral appraisal |
<p>| Regional/Rural | • The challenges and barriers faced when implementing the clinical education framework were having to get Uyen here from Melb to help with assessment as no-one here was able to fully do it, &amp; working through the learning modules was quite time consuming | • Well set out/ comprehensive framework &amp; learning modules | • Perhaps simplifying the framework a little &amp; making sure there is no repetition within it | Yet to do 2 of 4 case studies &amp; has not been officially signed off on the remaining 20% of the assessment |</p>
<table>
<thead>
<tr>
<th>Site</th>
<th>Challenges and barriers CEF</th>
<th>Strengths</th>
<th>Areas for improvement</th>
<th>Is there anything that wasn’t achieved, why</th>
</tr>
</thead>
</table>
| Metro        | • Allocating adequate time for the PAR clinician to complete the learning and competency package alongside the normal day-to-day physiotherapy workplace requirements.  
• Orthopaedic Consultants allocating time in their fully booked clinic schedules to assist with assessment of PAR clinician competencies and X-ray review meetings | • The PAR clinician found the DHHS Arthroplasty and Radiology modules to be particularly useful for building a suitable level of knowledge/skill for the PAR clinic. The PAR clinician found completion of the work based assessments carried out by the WH Orthopaedic Consultants to be a stressful process, however, acknowledged their importance for building confidence within the Orthopaedic team of the PAR clinician’s skill and more broadly the PAR clinic. | • The pathology and pharmacology modules could be improved by including clinic-specific case examples (e.g. PAR clinic patients) to make the information more targeted and engaging. | The Diabetes APA module has not yet been completed; however the PAR clinician has attended education sessions regarding the influence of diabetes on patient management. The pathology module is currently being completed. |
| Regional/Rural | • Getting the consultant to perform the work based observation. As the clinic is run alongside the fracture clinic, getting the consultant to commit to a 15 minute assessment was difficult.  
• Time taken was a barrier, there was a great deal of information to process and the radiology assessment was very time consuming. | • very thorough knowledge base | • refinement of relevant information, more standardised testing. |                                                                                                                                     |
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<tr>
<th>Site</th>
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<th>Strengths</th>
<th>Areas for improvement</th>
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| Regional/Rural | • Making all parties aware of commitments in the clinical education framework as the documentation was much more extensive than originally anticipated.  
• AMP Clinician time spent on achieving competencies and self-directed learning was well in excess of original estimates.  
• Barriers – Delays in completing competencies due to AMP clinician also being employed as project manager. Has made time frames difficult to estimate and achieve. | • Detailed review of literature in each self-directed training module  
• Provides known standard of competency across the state for facilities looking to implement AMP services and for facilities looking to employ clinicians who have previously completed credentialing process. | • Size of learning needs assessment could be reduced. As a senior physiotherapy clinician, gaps in knowledge were easily identified within general areas of the Learning Needs documents e.g., pharmacology  
• Access to reference material including text books and upToDate.com – some of the references require updating as no longer at the web link in the module reference list.  
• An estimate of costs for learning materials such as diabetes module, upToDate.com subscription and purchase of some primary texts would also be appropriate for organisations planning to implement advanced practice roles | The University of Melbourne Radiology Subject was not completed.  
The Lightbox Radiology workshop was appropriate for the completion of the radiology component of the credentialing process. |
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<tr>
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<th>Strengths</th>
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<th>Is there anything that wasn’t achieved, why</th>
</tr>
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<tbody>
<tr>
<td>Regional/ Rural</td>
<td>• Large amount of time required to complete learning packages</td>
<td>• Resources were very helpful, particularly the radiology modules.</td>
<td>• Some modules are repetitive from one to the other e.g. TKR and THR, maybe they could be integrated together or an indication on the learning package that it is a double up from another module.</td>
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<tr>
<td></td>
<td>• Clinical pressures encroaching on study time to complete learning packages.</td>
<td>• Learning modules were easy to follow and methodical with an excellent variety of references</td>
<td>• Communication package may be routinely covered in most hospital orientations, ISBAR now well embedded within organisations and therefore not necessarily a requirement. May be a component on medical documentation and letter writing would be more beneficial.</td>
<td></td>
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<td></td>
<td>• Orthopaedic surgeons are not full time are BHS and therefore access to them to meetings and discussions around competency package was quite difficult.</td>
<td>• Comprehensive but adaptable to local organisation/model of care.</td>
<td>• The pharmacology module is very comprehensive, perhaps there could be a main pharmacology module and then sub-modules for PAR and other specific clinics. This might be useful and efficient to a staff member only working in a PAR clinic.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Completion of assessment tasks with Mentor site difficult due to conflicting and busy schedules at both ends.</td>
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</tr>
<tr>
<td>Regional/ Rural</td>
<td>• There were no real challenges implementing the clinical education framework as there were no significant gaps to address. The grade 3 AMP reports that working through the clinical framework was time intensive.</td>
<td>• Ability to self-identify gaps and address them.</td>
<td>• Formalising a process for new staff to complete prior to working in PAR is challenging and time consuming. Suggest that recruitment to these roles needs to be selective of staff that have skills in inpatient care or immediate post discharge of joint replacement.</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Can utilise other disciplines in the Orthopaedic team to assess the competence of the Grade 3 AMP e.g. Orthopaedic surgeons. This role is an important part of Orthopaedic team and so therefore extensive knowledge of multiple parameters in required to be known e.g. infection, DVT, team communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site</td>
<td>Challenges and barriers CEF</td>
<td>Strengths</td>
<td>Areas for improvement</td>
<td>Is there anything that wasn’t achieved, why</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------</td>
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<td>---------------------------------------</td>
</tr>
<tr>
<td>Metro</td>
<td>• Volume of content&lt;br&gt;• Time required to complete&lt;br&gt;• Competing demands as clinic occupancy increased</td>
<td>• Comprehensive&lt;br&gt;• Great resources especially for clinicians with less experience in PAR / AMP roles&lt;br&gt;• Radiology package was excellent and very relevant</td>
<td>• Can be Repetitive&lt;br&gt;• Lack of acknowledgement / recognition of prior education, learning and experience&lt;br&gt;• Potential to simplify / reduce some of the content</td>
<td>No</td>
</tr>
<tr>
<td>Metro</td>
<td>• The key barriers were getting to grips with the forms required to complete the assessment and how to link to the competency standard. The amount of forms made it complicated at first.&lt;br&gt;• A challenge that was not overcome at this stage was getting a formal workplace assessment by an orthopaedic surgeon.&lt;br&gt;• We have not yet developed a competency standard for the ACL Reconstructions, rotator cuff repairs and Achilles tendon repairs. Time and priority were the key barriers here.</td>
<td>• The clinical education framework was a comprehensive process that had all the tools required for competency achievement. This process is often poorly done in allied health organisations, particular competency assessment because it may be seen as a low priority for staff compared to maintaining service delivery, evidence based care and conducting research and quality projects. However this project emphasised the importance of competency achievement and was supported by a mentor site making it a success.</td>
<td>• Could the process be simplified at the start by removing the learning needs analysis?</td>
<td>A formal workplace assessment by an orthopaedic surgeon was not achieved. The key barrier was the clinical director of orthopaedics did not support this process due to the large demands they currently face. However they would support if there was available time and appropriate funding.</td>
</tr>
<tr>
<td>Metro</td>
<td>• Hesitancy of staff in allocating work time to PD activities in light of significant clinical loads&lt;br&gt;• Some difficulty in learning to drive the competency framework and assessment forms which are quite comprehensive and detailed!</td>
<td>• Level of detail included&lt;br&gt;• Training packages with detailed links to resources with appropriate specific detail for each area covered&lt;br&gt;• Ability to tailor the framework to suit the health network’s particular requirements</td>
<td>• The documents and checklists involved are quite lengthy, take some time to get the hang of, and seem a little daunting at first glance</td>
<td>No</td>
</tr>
<tr>
<td>Site</td>
<td>Challenges and barriers CEF</td>
<td>Strengths</td>
<td>Areas for improvement</td>
<td>Is there anything that wasn’t achieved, why</td>
</tr>
<tr>
<td>------</td>
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<td>-------------------------------------------</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Takes into account the learning needs of each individual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ability to share the learning amongst the team – fosters a collaborative approach</td>
</tr>
</tbody>
</table>
## Appendix C: Final outcomes of Implementing Advanced Musculoskeletal Physiotherapy services

Information below collated from PwC Final Implementation Site Reports

### Activity of AMP services

<table>
<thead>
<tr>
<th>Site</th>
<th>Model of Care</th>
<th>Available appointments</th>
<th>OOS</th>
<th>DNA/DNW</th>
<th>Planned OOS</th>
<th>Capacity %</th>
<th>Formal referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>346</td>
<td>173</td>
<td>42</td>
<td>215</td>
<td>87</td>
<td>&lt;103</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>472</td>
<td>396</td>
<td>29</td>
<td>425</td>
<td>89</td>
<td>21</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>152</td>
<td>95</td>
<td>20</td>
<td>115</td>
<td>76</td>
<td>&lt;102</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>258</td>
<td>180</td>
<td>36</td>
<td>216</td>
<td>84</td>
<td>&lt;106</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>511</td>
<td>344</td>
<td>15</td>
<td>359</td>
<td>73</td>
<td>13</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>443</td>
<td>262</td>
<td>84</td>
<td>346</td>
<td>78</td>
<td>14</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>266</td>
<td>197</td>
<td>24</td>
<td>221</td>
<td>83</td>
<td>19</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>128</td>
<td>88</td>
<td>26</td>
<td>114</td>
<td>89</td>
<td>&lt;103</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>313</td>
<td>209</td>
<td>18</td>
<td>227</td>
<td>73</td>
<td>&lt;106</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>164</td>
<td>113</td>
<td>11</td>
<td>124</td>
<td>76</td>
<td>20</td>
</tr>
<tr>
<td>Metro</td>
<td>EDSITRC</td>
<td>477</td>
<td>349</td>
<td>54</td>
<td>403</td>
<td>84</td>
<td>47</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>ED</td>
<td>NA</td>
<td>253</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Metro</td>
<td>Neurosurgery</td>
<td>NR</td>
<td>134</td>
<td>NR</td>
<td>NR</td>
<td>97</td>
<td>24</td>
</tr>
</tbody>
</table>

PAR=Post Arthroplasty Review Clinic, OOS= Occasions of Service, DNA/DNW= did not attend/did not wait, EDSTIRC=Emergency department soft tissue injury review clinic, ED = Emergency department, NA= not applicable, NR=not recorded. (Data collated from PwC Final report for each Implementation Site)
### Cost Effectiveness of Advanced Musculoskeletal Physiotherapy Clinics

<table>
<thead>
<tr>
<th>Site</th>
<th>Model of Care</th>
<th>Time saved in surgeon (mins)</th>
<th>Total value surgeon time saved $</th>
<th>Value of OOS baseline $</th>
<th>Value of OOS AMP $</th>
<th>Total savings over planned OOS $</th>
<th>Reoccurring cost of OOS AMP $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>13</td>
<td>9371</td>
<td>66</td>
<td>48</td>
<td>3807</td>
<td>44</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>12</td>
<td>9962</td>
<td>56</td>
<td>63</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>13</td>
<td>5449</td>
<td>106</td>
<td>37</td>
<td>7926</td>
<td>77</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>28</td>
<td>13985</td>
<td>113</td>
<td>20</td>
<td>20221</td>
<td>55</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>11</td>
<td>9627</td>
<td>85</td>
<td>54</td>
<td>10590</td>
<td>84</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>7</td>
<td>3244</td>
<td>67</td>
<td>36</td>
<td>6848</td>
<td>59</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td></td>
<td>51</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>18</td>
<td>7279</td>
<td>44.2</td>
<td>42.6</td>
<td>386</td>
<td>61</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>13</td>
<td>6063</td>
<td>105</td>
<td>51</td>
<td>6749</td>
<td>65</td>
</tr>
<tr>
<td>Metro</td>
<td>EDSITRC</td>
<td>11</td>
<td>10714</td>
<td>49</td>
<td>17</td>
<td>12782</td>
<td>30</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>ED</td>
<td>NA</td>
<td>NA</td>
<td>84</td>
<td>82</td>
<td>506</td>
<td>91</td>
</tr>
<tr>
<td>Metro</td>
<td>Neurosurgery</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
</tbody>
</table>

AMP= Advanced Musculoskeletal Physiotherapy, PAR=Post Arthroplasty Review Clinic, OOS= Occasions of Service, DNA/DNW= did not attend/did not wait, EDSTIRC=Emergency department soft tissue injury review clinic, ED = Emergency department, NA= not applicable, NR=not recorded. (Data collated from PwC Final report for each Implementation Site)
## Effectiveness of Advanced Musculoskeletal Physiotherapy Clinics

<table>
<thead>
<tr>
<th>Site</th>
<th>Model of Care</th>
<th>% of review appointments that occurred on time</th>
<th>Impact on waiting times</th>
<th>Outcomes measures taken</th>
<th>% of patients seen who had GP letters</th>
<th>Other outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>109 (99%) patients met 2/52 reviews 15 (41%) met 6/12 reviews 8 (100%) met 12/12 reviews</td>
<td>Average wait time to see AMP was 5 mins</td>
<td>100% 6/12 &amp; 12/12 reviews</td>
<td>172 (99%)</td>
<td>Savings attributable to a reduction in ED representations = average of $3,102 per month. Total savings per private patient are $143, with total savings = $4,017 across 28 patients</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>87% patients met 3/52 reviews, 76% met 6/52 reviews, 38% met 6/12 reviews and 47% of 12 month reviews met their review points on time. This compares to 7% (3/52), 44% (6/52), 24% (6/12) and 45% (12/12) baseline period</td>
<td>Average wait time to see AMP on the day was 11mins Increase in the number of NP seen (511 c/w 402 baseline). September 2014, patients seen waited on average 303 days to see orthopaedic specialist c/w 516 days the year before.</td>
<td>99-100%</td>
<td>392 (99%)</td>
<td>Compared to the baseline sample, there has been a 7.5% reduction in MUAs (= 30 MUAs). Assuming average cost of a MUA is $8,000, this equates to savings of $237,600 DNA rate 6.5% c/w 10% ortho</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>51 (73%) met 12/12 review c/w 18% baseline, 2 (8%) met 5 year review c/w 0% baseline.</td>
<td>33% reduction in the 'to be booked' orthopaedic WL</td>
<td>92 (97%)</td>
<td>94 (99%)</td>
<td>Tele-health model implemented</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>3/12 reviews met 53% c/w 70% baseline 12/12 review met 56% c/w 50% baseline 5 year reviews met 38% c/w 30% baseline 10 year reviews met 36% c/w 10% baseline 10 year + reviews met 85% c/w 10% baseline</td>
<td>Average wait time to see an AMP on the day was 2 mins Average days waiting for a NP with orthopaedic specialist reduced from 29 days baseline to 2 days current period</td>
<td>180 (100%)</td>
<td>167 (93%)</td>
<td>Tele-health model developed and in trial</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>77% met 6/52 review c/w 50% baseline 61% met 3/12 review c/w 50% baseline 87% met 12/12 review c/w 10%</td>
<td>Average wait time to see an AMP on the day was 1min</td>
<td>100%</td>
<td>Not reported</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>PAR</td>
<td>Baseline</td>
<td>METRO PAR</td>
<td>Reduction in WL but 82% increase in arthroplasty surgery over period of PAR clinic</td>
<td>Support from orthopaedics to expand further</td>
<td></td>
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<tr>
<td>-----------------</td>
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<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>METRO</td>
<td>PAR</td>
<td>39% met 6/12 review c/w 17% baseline</td>
<td>More surgeon reviews 4870 c/w 4493 at baseline</td>
<td>245 (94%) function 230 (88%) quality of life</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>65% met 12/12 review c/w 100% baseline</td>
<td>Less NP seen by surgeon 946 c/w 1291 baseline</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>METRO</td>
<td>PAR</td>
<td>58% met 6/52 review c/w 58% baseline</td>
<td>No reduction in WL but 82% increase in arthroplasty surgery over period of PAR clinic</td>
<td>171 (87%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>63% meet 3/12 review c/w 58% baseline</td>
<td>Average wait time to see an AMP on the day 10 mins</td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>METRO</td>
<td>PAR</td>
<td>60% of 3 /12 met their review</td>
<td>250 more appointments per annum</td>
<td>89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0% of 6/12 met their review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70% of 12/12 met their review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>64% of 2 year met their review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>88% of 5 year met their review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% of 7 year met their review</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>75% of 3/12 review patients, 65% of 12/12 review patients and 50% of 2 year review patients met their review. The proportion of patients meeting scheduled review points was overall lower than the baseline</td>
<td>more NP seen (433 compared to 361) by an orthopaedic specialist c/w baseline but fewer review patients (401 compared to 630).</td>
<td>202 (97%)</td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>METRO</td>
<td>PAR</td>
<td>80% met 6/52 review c/w 28% baseline</td>
<td>167 new patients and 125 review patients seen by orthopaedic specialist c/w baseline</td>
<td>105 (93%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>77% met 12/12 review c/w 63% baseline</td>
<td>Average wait time to see an AMP on the day was 10mins</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>51% met 6/12 review c/w 57% baseline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>AMP in ED</td>
<td>Decline in the number of ED representations within 28 days (107 in</td>
<td>Average patient wait time for those patients seen by the</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Metro</td>
<td>Neurosurgery</td>
<td>Additional 200 appointments added</td>
<td>260 patients removed from WL, many waiting for 2 years</td>
<td>Not reported</td>
<td>Not reported</td>
<td>87% of patients seen did not require specialist appointment</td>
</tr>
<tr>
<td>-------</td>
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<td>----------------------------------</td>
<td>------------------------------------------------------</td>
<td>--------------</td>
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<td>---------------------------------------------------------------</td>
</tr>
</tbody>
</table>

Sept 2013 to Jan 2014 c/w 85 in Sept 2014 to Jan 2015) are valued at $19,690.

ED medical officer in AMP hours has dropped from 30 minutes to 22 minutes required by ED doctor, only 5% of all OOS were out of the scope of practice & referred back to doctor.

PAR= Post Arthroplasty Review Clinic, OOS=occasions of service, AMP=Advanced Musculoskeletal Physiotherapist, MUA= Manipulation under anaesthetic, ED=Emergency Department, EDSTIRC= Emergency Department Soft Tissue Injury Review Clinic, DNA = did not attend, c/w = compared with, WL = waiting lists N/A= not applicable, OOS=Occasions of service, NP= new patient (Data collated from PwC Final report for each Implementation Site)
### Quality and Satisfaction of Advanced Musculoskeletal Physiotherapy Clinics

<table>
<thead>
<tr>
<th>Site</th>
<th>Model</th>
<th>GP letters sent</th>
<th>Outcome measures taken</th>
<th>Workforce satisfaction no. of responses (%)</th>
<th>Patient satisfaction no. of responses (%)</th>
<th>Successful funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>172</td>
<td>173</td>
<td>9 100%</td>
<td>53 100%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>392</td>
<td>266</td>
<td>9 100%</td>
<td>37 100%</td>
<td>no</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>94</td>
<td>92</td>
<td>6 100%</td>
<td>17 100%</td>
<td>yes</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>167</td>
<td>180</td>
<td>8 100%</td>
<td>20 91%</td>
<td>yes</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>NR</td>
<td>198</td>
<td>12 86%</td>
<td>7 88%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>NR</td>
<td>230</td>
<td>6 55%</td>
<td>93 99%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>NR</td>
<td>171</td>
<td>6 60%</td>
<td>33 100%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>88</td>
<td>78</td>
<td>5 100%</td>
<td>30 100%</td>
<td>yes</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>PAR</td>
<td>206</td>
<td>202</td>
<td>5 100%</td>
<td>110 92%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>PAR</td>
<td>105</td>
<td>108</td>
<td>5 100%</td>
<td>30 100%</td>
<td>yes</td>
</tr>
<tr>
<td>Metro</td>
<td>EDSTIRC</td>
<td>NA</td>
<td>NA</td>
<td>12 92%</td>
<td>42 98%</td>
<td>yes</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>ED</td>
<td>NA</td>
<td>NA</td>
<td>7 100%</td>
<td>80 90%</td>
<td>?</td>
</tr>
<tr>
<td>Metro</td>
<td>Neurosurgery</td>
<td>NR</td>
<td>NR</td>
<td>2 100%</td>
<td>17 89%</td>
<td></td>
</tr>
</tbody>
</table>

PAR= Post Arthroplasty Review Clinic, ED=Emergency Department, EDSTIRC= Emergency Department Soft Tissue Injury Review Clinic, NR= Not recorded N/A=not applicable (Data collated from PwC Final report for each Implementation Site)
# Appendix C: Top 3 Achievements Implementation sites

Information compiled from Implementation Sites final progress reports

<table>
<thead>
<tr>
<th>Site</th>
<th>Top 3 achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/Rural</td>
<td>• Improved working relationship between outpatient physiotherapy and orthopaedic team generally</td>
</tr>
<tr>
<td></td>
<td>• Patient satisfaction with the PAR clinic</td>
</tr>
<tr>
<td></td>
<td>• Successfully implementing first AMP role</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro</td>
<td>• Successfully transitioning to a new PARS clinician in the middle of the project, demonstrating the sustainability measures put in place are effective.</td>
</tr>
<tr>
<td></td>
<td>• Expansion of the clinics has enabled a stronger AMP team which now has the ability to meet regularly to exchange ideas and complete parts of the learning pathway.</td>
</tr>
<tr>
<td></td>
<td>• Maintaining excellent stakeholder support through multiple clinician and managerial changes (both physiotherapy and medical) and in the varied hospital environment</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>• Development of and trial of a new model of care</td>
</tr>
<tr>
<td></td>
<td>• Medical support</td>
</tr>
<tr>
<td></td>
<td>• Stakeholder engagement</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro</td>
<td>• Clinics booked to maximum capacity in October 2014</td>
</tr>
<tr>
<td></td>
<td>• Effective implementation of Clinic in a challenging environment (apprehension from some orthopaedic consultants regarding the PAR Clinic).</td>
</tr>
<tr>
<td></td>
<td>• Positive staff satisfaction feedback</td>
</tr>
<tr>
<td>Regional/Rural</td>
<td>• Key stakeholder engagement</td>
</tr>
<tr>
<td></td>
<td>• Satisfaction of physio working to their full capacity</td>
</tr>
<tr>
<td></td>
<td>• Building a sustainable business case in a private-in-public setting that may be applied to possible other AMP roles</td>
</tr>
<tr>
<td>Metro</td>
<td>• Improving access and consistency of care for WH patients post hip or knee arthroplasty</td>
</tr>
<tr>
<td></td>
<td>• Further strengthening existing positive working relationships between the Orthopaedic, Outpatient Services and Physiotherapy Departments at WH</td>
</tr>
<tr>
<td></td>
<td>• Building and strengthening relationships and knowledge/skill sharing with AMPs at other health networks</td>
</tr>
<tr>
<td></td>
<td>• Providing a challenge for the AMP to improve their skills in a different area of physiotherapy</td>
</tr>
<tr>
<td>Site</td>
<td>Top 3 achievements</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Regional/Rural    | - Relationship building in ERH Emergency Department between physiotherapy department staff and nursing and medical staff to create an interdisciplinary team of health professionals  
                      - Establishment of an Advanced Scope of Practice physiotherapy role in a sub-regional health service and the learning opportunities for all stakeholders that have resulted from the role being established  
                      - The experience provided by project management role including networking with other hospitals and undertaking the necessary tasks assigned to the project manager  |
| Regional/Rural    | - Medical Support  
                      - The support from our Orthopaedic team has been very good, this clinic has further developed the working relationships between Orthopaedics and Physiotherapy. We hope that this will continue and that Orthopaedics may initiate further was to integrate the two health professions further in the future to help the patient management and throughput or Orthopaedic patients at Ballarat Health Services.  
                      - Successful business case  
                      - The ability to convert this implementation project to an ongoing funded clinic was a great achievement. It will enable to expansion of the clinic to include more patients and have greater impact on the efficiencies of the Orthopaedic clinics.  
                      - Networking with other services offering AMP services not just other PAR Clinics but all other kinds of AMP services. This allows us to discuss these clinics and their application potential to our own health service.  |
| Regional/Rural    | - Establishing a more structured and better quality service for post arthroplasty review patients. Previous follow up by the organisation was identified as an area that could be improved. The PAR clinic has added structure as well as improved quality by utilising and recording functional measures which allow better evaluation of individual clients and the service as a whole. This was achieved without increasing the risk to the patients or staff. This project has provided significant value add to patient journey as reported by patient satisfaction survey assisting patients to achieve the functional goals that they wanted.  
                      - Decreasing the burden on orthopaedic clinics and allowing new appointments for patients requiring prioritised Orthopaedic Surgeon input.  
                      - Establishing another AMP role which helps the physiotherapy department develop. It will aid staff satisfaction, recruitment and retention as well as providing further evidence to support any future AMP projects  |
| Metro             | - Medical support (Orthopaedic Specialists) – Mixed views on AMP-PAR to start “traditionally role” but now 100% supportive  
                      - Key Stakeholder Engagement (Clinic admin / Ward clerk) – PAR Clinic was an additional task, added complexity to role  
                      - Consumer satisfaction – Consistently positive feedback and survey data indicated 100% “highly satisfied” with AMP-PAR clinic |
<table>
<thead>
<tr>
<th>Site</th>
<th>Top 3 achievements</th>
</tr>
</thead>
</table>
| Metro | • Networking with the mentor site – this was a great experience for the project leads and essential to the success of the project.  
• Implementing Clinical Education Framework for the AMPs involved in service delivery.  
• Key stakeholder engagement at steering committees and working parties |
| Metro | • Key stakeholder involvement and building of the relationship between physiotherapy and orthopaedics – this has created a significant improvement in the orthopaedic department’s understanding of the knowledge and skills of the physiotherapists, and their confidence in the AMPs abilities. It has also led to the orthopaedic department putting forth ideas for other AMP services, and driving the process of applying to implement such services  
• Satisfaction of the AMPs involved in the service – the challenge involved in managing the patient profiles referred into the clinic; the learning opportunities and the education framework; and the close working relationship with the orthopaedic consultants and other AMP team members, has created an environment that provides significant work satisfaction for the physios involved in the service  
• Networking and relationships with other health networks – the sharing of knowledge, resources and support across health networks has been an incredibly positive experience, one we hope continues to be fostered |