Physiotherapist-led paediatric fracture clinic

Professions involved: physiotherapy
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Background
Barwon Health is a large regional health service in Victoria, Australia. The out-patient orthopaedic fracture clinic at University Hospital Geelong services paediatric patients aged 16 years and under presenting for care of acute simple limb fractures. The predominant fracture types patients present with are elbow and wrist fractures.

The development, trial and integration of a physiotherapist-led paediatric fracture clinic (PFC) in 2013 provided an opportunity for advanced practice physiotherapists to:

- share the load of routine outpatient fracture care previously only completed by orthopaedic doctors under the supervision of an orthopaedic consultant. This releases senior medical staff to undertake other activities
- support and further develop skills obtained in primary contact emergency practice
- improve continuum of care for patients seen in the emergency department, enhancing patient care and minimising delays
- receive clinical supervision by working in parallel with the consultant-led orthopaedic clinics.

Patients are referred from University Hospital Geelong emergency department, general practice, or transferred from other services outside our catchment.

Clinical practice is supported by The Royal Children’s Hospital (unpublished) paediatric fracture clinical practice guidelines (CPG) as well as direct access within clinic to orthopaedic consultant opinion and on-call orthopaedic trauma services.

Drivers for change
The clinic has been historically characterised by a weekly clinic with a large patient waiting list. Drivers for change were:

Cost implications
- The orthopaedic fracture clinic regularly ran overtime by more than one to two hours. These late finishes had a significant impact on medical, nursing and administrative staffing overtime.
Patient-based implications

- A large number of appointments were scheduled for each clinic day (90.7 patient visits per clinic).
- Overbooking of patient appointments resulted in long wait times on the day of clinic (169 minutes per patient).

Service-based implications

- The orthopaedic fracture clinic was considered a high priority for reform as part of a broader outpatient service review by the Barwon Health service redesign unit.
- Physiotherapists at Barwon Health have a long history of developing quality and safely initiatives, and successfully delivering adult orthopaedic advanced practice clinics and paediatric developmental orthopaedics.
- The Victorian Paediatric Orthopaedic Network (VPON) offered Barwon Health an opportunity to trial a physiotherapist-led PFC to test the recently developed paediatric fracture CPG.
- The clinic would facilitate seamless transition of paediatric patients from emergency department to the fracture clinic and then to discharge.

Solution and implementation process

A funding grant from the VPON and in-kind support from Barwon Health enabled the physiotherapy department to recruit a project officer for eight months to define, scope and trial the physiotherapy-led paediatric fracture clinic.

The 0.4 EFT grade 3 advanced practice physiotherapist trialled the clinic.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Action</th>
<th>Timeframe</th>
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<tbody>
<tr>
<td>Role development and recruitment (including training)</td>
<td>Initial project officer/advanced practice physiotherapist recruited.</td>
<td>October 2012</td>
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<tr>
<td>Service development</td>
<td>Undertook literature search.</td>
<td>November 2012</td>
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<tr>
<td>Service development</td>
<td>Developed scope of practice document in consultation with orthopaedics, outpatients, radiology, physiotherapy and surgical services executive.</td>
<td>November to December 2012</td>
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<tr>
<td>Service development</td>
<td>Integrated the clinic into outpatient administrative systems (such as IT and nursing resources).</td>
<td>November to December 2012</td>
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<tr>
<td>Monitoring and evaluation development</td>
<td>Data collection and reporting systems developed for capture of demographic and performance data for both existing and trial clinics.</td>
<td>November to December 2012</td>
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<tr>
<td>Role development (including training)</td>
<td>Reviewed scope of practice against training experience, paediatric fracture CPG and local practice.</td>
<td>December 2012</td>
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<tr>
<td>Service implementation</td>
<td>Implemented twice-weekly physiotherapist-led PFC.</td>
<td>January to June 2013</td>
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<tr>
<td>Service implementation</td>
<td>Recruited second trial clinical physiotherapist.</td>
<td>January 2013</td>
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<tr>
<td>Monitoring and evaluation</td>
<td>Satisfaction survey developed, disseminated and evaluated.</td>
<td>March to July 2013</td>
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<tr>
<td>Monitoring and evaluation</td>
<td>Preliminary pilot report drafted, outcomes accepted by local executives and ongoing local funding awarded from Surgical</td>
<td>April to August 2013</td>
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### Services.

<table>
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<tr>
<th>Service implementation</th>
<th>Surgical services executive and head of orthopaedics accepted role and outcomes evaluation. Recruited a lead physiotherapist with ongoing funding from Surgical Services.</th>
<th>July 2013</th>
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<tr>
<td>Role development (including training)</td>
<td>Trained lead physiotherapist in orthopaedic fracture clinic.</td>
<td>November to January 2013</td>
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The physiotherapy led-clinic runs parallel to the orthopaedic consultant clinics for professional support and access to on call trauma service.

The key tasks undertaken by the physiotherapist include:

- triage of new referrals against agreed scope of practice
- radiology ordering and interpretation
- developing management plans in line with CPG
- plaster application and removal
- referral to on-call orthopaedic trauma service for patients requiring management in theatre following outpatient review.

The flow of paediatric patients referred to outpatients with a fracture is represented in the Figure 1.

**Figure 1: Patient flow for paediatric patients presenting to outpatients with a fracture**

### Challenges

The clinic’s implementation progressed smoothly due to considerable upfront planning.

However, there were a number of key challenges that needed to be addressed.

### Scope of practice

The Royal Children’s Hospital CPG to be used across orthopaedics and emergency medicine statewide are currently under development. At a local level this meant that practitioner scope of practice has reflected and grown according to the availability of guidelines.
Where patients fell outside the guidelines during the trial period, these patients were discussed with orthopaedic consultants.

**Imaging**

There continues to be a delay in ordering imaging (for example, all X-ray requests) stemming from billing rights that require a doctor’s signature.

This remains an area of ongoing work to negotiate with radiology to streamline the process across all areas of advanced physiotherapy practice.

**Funding**

The clinic has experienced funding challenges when attempting to grow and expand its scope, such as adult fracture clinics.

To address this challenge the team has collated relevant evidence and documentation to support further funding within paediatrics and adult fracture clinics as funding becomes available.

**Recruitment**

There is a limited career pathway into this role for physiotherapists, which meant it was difficult to recruit staff with the appropriate skill set.

Currently, all staff within the clinic have a background in the emergency department as a primary contact physiotherapist, in addition to experience in an advanced practice outpatient clinic.

To address skill requirements, staff have to complete training via competency tasks, as well as more than 50 hours of supernumerary work in the orthopaedic fracture clinic and physiotherapist-led paediatric fracture clinic.

**Outcomes and impacts**

The clinic has been very successful in addressing the drivers for change.

Figure 2 shows clinic performance data for the physiotherapist-led paediatric fracture clinic and orthopaedic fracture clinic versus orthopaedic fracture clinic 12 months prior to implementation.

The clinic has had a positive effect on patient time in service through both the physiotherapy-led paediatric fracture clinic and orthopaedic fracture clinic.

Indeed, patients seen in the physiotherapist led paediatric fracture clinic spent 90 minutes less in outpatients than the orthopaedic clinic pre-implementation in 2012.

All patients seen in the general fracture clinic spent 20 minutes less in outpatients, when compared with historical control.

Qualitative evaluation was undertaken by surveying the carers of a randomly selected sample of 50 paediatric patients over the trial period. The results showed:

- 100 per cent of patients’ carers agreed or strongly agreed that the length of time spent in outpatients on the day of appointment was acceptable, and that after attending their appointment in the PFC, they had a better understanding of the condition and how to manage it.
- 100 per cent of patients’ carers rated the care they received in the PFC as either very good or excellent.
- The three instances of negative feedback related to inadequate signage within the hospital, inadequate seating within outpatients and difficulty accessing radiology.
- No negative feedback was received regarding the provision of clinical care in the PFC.
Figure 2: The distribution of patient numbers and time in department across three fracture clinics at Barwon Health

The evaluation confirmed there was no significant difference in the failure-to-attend rates across all fracture clinics. This indicates management of fracture cases by a physiotherapist, as opposed to medical management, is not a barrier to attending appointments.

The outcomes support the physiotherapy model of care in providing safe, timely care for paediatric patients presenting with simple limb fractures.

In September 2015, the clinic had a total of 0.4 EFT allocated. This translates to clinical staff (0.2 EFT), triage and service development (0.1 EFT) and leave cover or one-off training opportunities (0.1 EFT).

The clinic is currently supported by three grade 3 advanced practice physiotherapists.

Conclusions and lessons learned

The project successfully delivered a service that more quickly addresses patient needs. The clinic allows patients to spend less time in outpatients on appointment days.

The PFC clinical model demonstrates the effectiveness of The Royal Children’s Hospital CPG to guide practice in the clinic. This is especially the case when the CPG is aligned with an agreed scope of practice and consider local orthopaedic practice variability.

The PFC demonstrates that physiotherapists can provide safe, timely care for paediatric patients presenting with simple limb fractures. Furthermore, the PFC provides a challenging and intellectually stimulating area of practice to support retention and engagement of the physiotherapist workforce.

It is important to note that the paediatric fracture clinic needs to be co-located with orthopaedic consultant-led clinics. This is for clinical supervision via case review, as well as efficient access to the on-call trauma service for patients who need surgical intervention. Further, the ability to access a highly skilled comparable workforce is essential to the success of the clinic.

This has been challenging, in the absence of a specific career or education pathway into this clinic. To support the sustainability of the clinic it should ideally be run every week of the year to provide continuity of patient care and service delivery.
Future directions and sustainability

The physiotherapist-led paediatric fracture clinic will continue as part of broader fracture clinic reforms at University Hospital Geelong.

Current plans aim to grow the paediatric fracture clinic to cater for increasing demand for paediatric fracture services.

This will involve work to ensure that physiotherapists are considered part of long-term fracture clinic model reforms, for both adults and children.

However, to ensure clinical support and access to on-call trauma services when required, the physiotherapist-led clinic must remain co-located with consultant led clinics.

It is envisaged that over time physiotherapists will be progressively integrated into the core staffing of the general fracture clinic, which is currently only staffed by doctors. This will require further review of relevant funding models and capture of supporting data.

Developing a sustainability plan is a priority to address recruiting, training, competency and leave cover of practitioners in this specialist physiotherapy area.

This sustainability plan will:

- consider the integration of current competency framework with existing Department of Health & Human Services competency packages
- consider appropriate succession planning
- assist in providing education opportunities for staff.

References


Key words

Physiotherapy, paediatrics, fractures, orthopaedics, outpatients

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