ALFRED HEALTH WEEK
June 2019

Caulfield Hospital Research & Quality Improvement and Service Promotion Posters

Coordinated by Deandra Burrows
on behalf of the
Caulfield Hospital Research Committee

BOOK OF ABSTRACTS & POSTERS

INTRODUCTION

Caulfield Hospital staff were invited to submit posters for the annual Caulfield Hospital Research Week Poster Competition, to be held as part of Alfred Health Week in June 2019.

Posters produced were eligible for submission, in two categories:

- Posters describing a Research Project
- Posters describing a Quality Improvement, Project Initiative or Innovation in Service Promotion.

Posters are to be judged for their content, design and relevance to Caulfield Hospital.

The Research Week Poster Competition is a successful feature of a sustained research culture at Caulfield Hospital. Caulfield Hospital will continue to grow this research environment resulting in the implementation of effective translational research and interdisciplinary and person centred models of care with links to defined clinical outcomes in areas of greatest need.

The Caulfield Hospital Research Committee would like to sincerely thank all contributors for their continued effort and enthusiasm.

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Posters describing a Research Activity

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Poster 1

Exploring characteristics and outcomes of a community rehabilitation upper limb group for stroke survivors in Victoria, Australia: a cohort study

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Introduction

The National Stroke Foundation Guidelines (2017) recommends that stroke survivors with reduced upper limb function be provided with intensive upper limb therapy tailored to the individual’s activity and occupational needs. However, there is limited evidence to guide how community therapists should provide upper limb rehabilitation, which clients to prioritise and how to enhance opportunities for rehabilitation through group programs.

Objectives

To identify client characteristics and report on upper limb outcome measures recorded for stroke survivors who attended a community upper limb group.

Methods

Retrospective cohort study: of n= 27 stroke survivors who attended an outpatient upper limb group weekly between October 2012-July 2015. Demographic details were extracted from medical records alongside outcome scores on the; Box and Block test, Motor Assessment Scale, Jamar dynamometer, Pinch dynamometer, 9 hole peg test and Visual Analogue Scale. Descriptive statistics, including means and percentages, will be used to compare outcomes. For the continuous outcome data, paired t-tests will be used to evaluate change in upper limb function (strength, dexterity and pain). Differences in mean total scores and confidence intervals will be calculated.

Results

Analysis is ongoing. Demographic characteristics indicate: the majority of participants had an ischemic stroke (n = 20, 74%), one-third were referred early post stroke (n = 10, 37% 90 days or less), the mean age was 61 years (range: 24 to 93 years), with 81% (n = 22) of participants being male. This information is being analysed and will be presented alongside the comparative change in pre/post outcome measure scores.

Discussion

Results will provide occupational therapists with essential baseline information about characteristics of stroke survivors who benefit from participating in an upper limb group. Information obtained may help facilitate prioritisation of wait-lists, and enable effective utilisation of resources to meet client needs and the Stroke Guidelines in a community setting.

Poster 2

Who are the patients with stroke that are admitted to gem? A comparison with rehabilitation and ABI

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Introduction

Patients admitted with stroke to Caulfield Hospital may be treated in one of three locations: GEM (Geriatric Evaluation and Management), Rehabilitation or ABI (Acquired Brain Injury) units. There is limited information locally and in the literature about differences in the unique characteristics and outcomes of patients admitted to GEM wards. We hypothesise that the admission characteristics and outcomes of stroke patients treated on GEM wards will be different to those in Rehabilitation and ABI.

Methods

A two-year retrospective audit of electronic medical records for all stroke admission to Caulfield Hospital during 2014-2015 (primary diagnosis according to ICD10 code).

Data for GEM, Rehabilitation and ABI groups were compared using Kruskal-Wallis Non-Parametric Tests (Chi square analysis for discharge destination):

Admission characteristics

1. Age
2. CCI (Charlson Comorbidity Index),
3. FIM (Functional Independence Measure),

Outcomes

1. LOS (length of stay),
2. FIM change,
3. Discharge destination,
4. Allied health therapy (total minutes/LOS)

Results

Two hundred and eighty-nine patients with stroke were admitted to Caulfield Hospital (GEM n=70, Rehab=170, ABI=49). Significance level was set at $p<0.05$.

		GEM vs. Rehab	GEM vs. ABI
Admission Characteristics	Age	**Significant**	**Significant**
	CCI	N/S	**Significant**
	FIM	**Significant**	N/S
Outcomes	LOS	N/S	**Significant**
	FIM Change	**Significant**	N/S
	Allied health therapy/day	**Significant**	**Significant**
	Discharge destination	**Significant**	**Significant**

*N/S= non significant

Discussion

Stroke survivors admitted to GEM wards at Caulfield Hospital are older than other strokes, receive less therapy and are less likely to be discharged home.

Their comorbidities and LOS are similar to Rehabilitation and different to ABI. Their functional level at admission and change of functional level at discharge are lower than Rehabilitation and similar to ABI.
Our results could suggest that less therapy time is associated with poorer outcomes of GEM strokes particularly in comparison with Rehabilitation. To answer this question we plan a multiple regression analysis that will also inform future research into treatment of strokes in GEM.

Poster 3

Instrumental gait analysis parameters for assessing lower limb spasticity: a systematic review

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Introduction

Upper motor neuron lesions may cause spasticity (impairment), which in turn may affect walking (function). Instrumental gait analyses (GA) provide detailed and sensitive analysis of walking. We conducted a systematic review to identify the spatiotemporal, kinematic and kinetic parameters used in instrumental GA for assessing adults with lower limb spasticity.

Methods

Data bases searched: Medline, EMBASE, CINAHL, AMED, Cochrane and PEDro. Inclusion criteria: empirical studies, adult participants, reported measurements of lower limb spasticity and instrumental GA. Exclusion criteria: interventions or history of orthopaedic surgery, GA studies published before 1991 and non-English manuscripts. At least two independent investigators reviewed each paper, and rated its quality (Quality Assessment Tools-NIH: good/fair/poor).

Results

Thirty-seven studies were included: 17 pre-post intervention (71% fair quality), 15 observational (73% fair), 4 controlled intervention (75% good) and 1 case study (poor). Total participants n=766 (489 stroke, 102 HSP,65 TBI, 46 SCI, 64 other). Spasticity was mainly assessed with the Modified Ashworth Scale n=32. In 8 studies direct correlation between spasticity and instrumental GA data was examined (significant correlation marked*).

Main spatiotemporal parameters:

- Gait velocity n=30*, Cadence n=15*
- Step stride/length n=15*, Step width n=7*
- Duration of: Stance n=16, Swing n=7, Double leg support n=6*

Main kinematic parameters:

- Amplitude/total ROM/Excursion n=10 (ankle n=7, hip n=6, knee n=11, pelvis n=3)
- Peak angle n=16 (ankle n=16, knee n=10, hip n=9)
- Angle at heel-strike/toe-off/midstance n=8:
- Angular velocity n=8 (ankle n=3, knee n=4, hip n=2)

Main kinetic parameters:

- Parameters were multiple and variable, most common: Peak moment n=4 and peak power n=3.
- EMG data supplemented instrumental GA data of 12 studies.

Discussion

Spatiotemporal and kinematic parameters were most comprehensively studied with instrumental GA. The parameters sensitive to spasticity were: gait velocity, cadence, step/stride length, step width and duration of double leg support. These findings confirm that spasticity does affect function.

Poster 4

Development of a sensory modulation pathway within acquired brain injury rehabilitation

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Introduction

Sensory modulation interventions are an emerging area of practice in acquired brain injury (ABI) rehabilitation. Clinician knowledge around methods for exploring individuals' sensory preferences, along with strategies for optimising arousal levels is paramount in maximising participation in rehabilitation and quality of life following ABI.

Aim

To describe the process of developing and implementing an evidence-based sensory modulation clinical pathway for patients with ABI.

Methods

An interdisciplinary sensory modulation work group was developed, and a literature review completed to establish evidence-based sensory screening tools and intervention approaches to guide development of a sensory modulation clinical pathway for patients with ABI. Consultation with clinical experts and researchers in sensory modulation was undertaken to inform both pathway development and associated education strategy. A survey was developed in alignment with the theoretical domains framework that explored clinicians' perceived knowledge, skills, and beliefs in relation to sensory modulation practices. This survey was implemented pre- and post-implementation of the clinical pathway, with outcomes used to inform development of targeted education for staff.

Results

Pre-implementation survey data indicated low confidence, perceived knowledge and skills by the interdisciplinary team in relation to sensory modulation practices. An education package comprising five education sessions was developed that targeted different subgroups of staff based on skills and knowledge required of their roles within the pathway. Three interdisciplinary sensory modulation champion roles were developed, with assigned responsibilities including support for education delivery and guiding practical application of the sensory modulation pathway. Following delivery of targeted education, the post-implementation survey data indicated increased staff confidence, knowledge and skill, with the clinical pathway reported to be routinely applied within practice.

Discussion

Development of an evidence-based clinical pathway, in combination with a targeted education strategy that is developed through clinician engagement, can facilitate knowledge translation and embed sensory modulation practices in an ABI rehabilitation setting.

Poster 5

Joy @ work

Harrower D[1], Vincent B[1], Ryan C[1], Keating N[1], Bierer C[1], Minter E[1, 2], Umansky S[1]

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Introduction

A research project conducted at Caulfield and Epworth Hospitals in 2015 identified compassion fatigue, burnout and secondary traumatic stress as an issue amongst some staff. In 2017, the Institute of HealthCare Improvement (IHI) published a white paper entitled: Framework for Improving Joy at Work. The white paper describes four steps to undertake to improve joy at work.

Methods

The four steps identified in the IHI white paper were introduced into the Alfred Health Community Rehabilitation Program to see if they improved staff joy at work. 'Joy' at work was measured by use of the Net Promoter Score (NPS), and the ProQOL. ProQOL is a tool that measures compassion satisfaction, burnout and secondary traumatic stress.

Results

The NPS improved significantly from the inception of the project in December 2017 to completion of the project in December of 2018. Throughout testing, there were no staff members that scored highly for burnout or secondary traumatic stress. There were no staff who scored 'low' for compassion satisfaction.

Discussion

The IHI white paper was a successful framework to use to improve staff joy at work in the Alfred Health Community Rehabilitation program. This framework could also be considered in other departments to improve staff joy at work.

Poster 6

Strength training to improve walking after stroke: how therapist, patient and workplace factors influence exercise prescription.

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Aim

To explore what influences physiotherapists when prescribing strength training with stroke survivors undergoing rehabilitation for gait impairment in Australia.

Design

A qualitative study with semi-structured interview questions using a grounded theory approach.

Method

Interviews were conducted with a convenience sample of physiotherapists currently providing rehabilitation services to patients following stroke in Australia. Interviews were transcribed verbatim and Line-by-line thematic analysis was undertaken to create themes and sub-themes.

Results

Participants were 16 physiotherapists (12 female) with 3 months – 42 years' experience working with people after stroke. Major themes identified were: 1) patient characteristics influence the approach to strength training, 2) interpretation of strength training principles varies widely, 3) therapist confidence and preference influences the delivery of strength training and 4) workplace context affects the treatment delivered.

Conclusion

Physiotherapists displayed wide variety in their interpretation of strength training principles and were often more focused on task practice and repetition. They reported many barriers to the effective delivery of strength training including confidence in their skills and limitations in their resources.

Poster 7

Pilot consumer-testing of a novel and affordable smart prosthetic hand

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Introduction

3D printing in the upper limb prosthetic industry is becoming increasingly accessible and affordable. While attracting positive media attention, functional outcomes rarely meet consumer expectations. Combining 3D printing and a steel fabricated mechanism the "Self Grasping Hand" (Delft University of Technology) seeks to improve upon grip strength and natural movement patterns of existing open-source 3D printed hand designs.

Methods

The participants are fitted with the device for use over a two-week period. Patterns of wear and total time in use are recorded via upper limb activity monitors. Satisfaction, function and prosthesis-related quality of life are measured using industry standard outcome measures.

Results

The consumer trial is currently underway with results unavailable at this time.

Discussion

The results of this pilot study will inform the methodology for larger-scale international consumer test of the hand. Data from the study will refine the design and assist in future developments of passive adjustable hand devices.

Poster 8

Global mapping for the epidemiology of paediatric spinal cord damage: towards a living data repository

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Introduction

Compared with adults, there is very little published epidemiological information about spinal cord damage in the paediatric population. As an initiative of the International Spinal Cord Society Prevention working group a project was planned to globally map key paediatric spinal cord damage epidemiological measures and provide a framework for an ongoing repository of data.

Methods

Literature search of Medline and Embase. Relevant articles in any language regarding children with spinal cord damage included. Stratification of information about incidence into Green/Yellow /Red quality 'zones' allowed comparison between data.

Results

862 abstracts were reviewed and data from 21 articles were included from 13 countries in 6 of the 21 Global Regions. Twelve of these were studies of paediatric traumatic spinal cause injury (TSCI) and six by non-traumatic spinal cord injury (NTSCI). An additional three articles provided both paediatric TSCI and NTSCI data. The median TSCI incidence rates in Global Regions were: Asia, East 5.4/million population/year; Australasia 9.9/million population/year; Western Europe 4.1/million population/year and North America, High Income 13.2 million population/year. The median NTSCI incidence rates in Global Regions were: Australasia 6.5/million population/year; Western Europe 7.5/million population/year and North America, High Income 2.1/million population/year. TSCI was mostly due to land transport (46% – 74%), falls (12% – 35%) and sport/recreation (10% – 25%) and NTSCI was mostly caused by tumours (30% – 63%) and inflammatory/autoimmune causes (28% – 35%).

Discussion

There is a scarcity of quality studies regarding the epidemiology, aetiology and survival following paediatric TSCI and NTSCI. Recent ISCoS frameworks provide better guidance for classification of NTSCI and age group cut-off levels in future studies.

Poster 9

A systems thinking approach to physical activity in older adults: a community perspective

Opeskin H[1], Wilkie C[1], Ayres, L[1], Burton N[1], Doshi D[1], Marwick S[1]

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Introduction

Physical activity rates are consistently low across the Caulfield Community Health Service (CCHS) catchment - particularly among older adults, compounding obesity and comorbidities. Increasing physical activity in the community is complex and without a straightforward solution. A systems thinking approach is required. This research project explored enablers and inhibitors to physical activity participation within the community. Information obtained from the project will shape and design future activities and programs to address the identified barriers to physical activity.

Methods

CCHS's health promotion team utilised group model building, a systems thinking tool to facilitate a participatory approach to understand the complex problem of physical inactivity. 15 local community members attended group model building sessions, facilitated by CCHS staff. A total of 3 group model building sessions were held.

Results

Participants identified enablers and barriers to physical activity at a local level and constructed a systems map. Participants expressed that the largest barrier to physical activity included discrimination, knowledge, motivation, transport, environment and attitudes. Participants identified important local community stakeholders as key actors for improving physical activity.

Discussion

Community participation in group model building reinforced that improving physical activity is a complex issue and requires the involvement of many actors. The group model building process highlighted mental models, assumptions and unconscious biases staff may possess. Stakeholders will be invited to group model building in 2019 to identify leverage points to influence systems change.

Poster 10

Early intervention for social skills impairment following acquired brain injury: promoting self-awareness to optimise community integration

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Introduction

Impaired social skills are a common consequence following acquired brain injury (ABI), and can contribute to challenges with both maintaining and forming relationships, resulting in lowered mood and social isolation. The impact of these impairments is often not realised until difficulties are encountered with community integration after leaving hospital. The purpose of this study is to describe a social skills training (SST) protocol for an inpatient ABI population; and to evaluate the effectiveness of this program in increasing awareness of social skills impairments.

Methods

An inpatient SST protocol was developed, informed by 2 existing protocols. A pre- and post- design was used, with outcome measures including the Self-awareness of Deficits Interview (SADI), La Trobe Communication Questionnaire (LTQ), and the Hospital Anxiety and Depression Scale (HADS). Knowledge of goals was also recorded. Six inpatients from an ABI Unit were recruited to the program. Data were analysed using descriptive statistics and coding techniques.

Results

The protocol for the 8-week SST program will be described. LTQ and HADS scores remained stable over time. Self-reports of social skills impairments obtained from SADI increased from 0% (pre-intervention) to 75% (post-intervention) for those participants that completed the full program. Knowledge of social skills goals reached 100% by the sixth group session.

Discussion

Early intervention in the subacute phase of recovery following ABI is important to achieve greater awareness of social skills impairments and successful community integration. Reinforcement of social skills goals is key to building awareness of impairments to achieve best outcomes.

Poster 11

Adult stroke survivors with upper limb spasticity set goals focused on activity limitations and participation restrictions

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Introduction

Patient-centred goal setting is an important component of spasticity management, and the goals set can provide insights into what matters most to people with chronic spasticity after stroke. The aim of this study is to describe the patient-centred goals related to the upper limb of stroke survivors with spasticity.

Methods

Semi-structured goal-setting interviews were completed with participants who had participated in a clinical trial designed to address upper limb spasticity after stroke. Goal setting was facilitated by experienced occupational therapists and physiotherapists as part of the baseline assessment. Goals were then independently coded using the International Classification of Functioning, Disability and Health (ICF) by two raters using established linkage rules.

Results

The n=134 adult stroke participants who were living in the community set n=402 goals. Most participants were male (70%) and they were a mean of 5 years (SD 7) post-stroke; approximately half (55%) had previously received botulinum toxin injection/s. Despite attending a clinic specifically aimed at reducing spasticity (an impairment), only n=98 goals (24%) mapped to Body Structure and Function Domains of the ICF, while 217 (54%) mapped to Activity/Participation Domains, and 87 (22%) mapped to both. It was more common for those participants who were naïve to botulinum toxin to set goals which addressed activity, than those who had a history of botulinum toxin. And those participants who had some active movement were also more likely to set goals which mapped to Activity and Participation Domains of the ICF than those without any grasp or release ability.

Discussion

Adults who attend a spasticity clinic articulate a wide range of goals across the ICF domains, but particularly focus on activity limitations and participation restrictions. Past experience with botulinum toxin injection, and baseline level of active motor function may be factors that may influence the type of goals set.

Poster 12

Validation of a clinical prediction rule for ambulation outcome after non-traumatic spinal cord injury

Sturt R[1], Hill B[1], Holland A[1,2], New P[3,4,5,] Bevans C[1]

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Introduction:

People who have sustained a spinal cord injury (SCI) prioritize return to walking as a key outcome. Predicting the ability to walk is of utmost importance in the clinical setting. This study aims to validate a Clinical Prediction Rule (CPR) for ambulation in a non-traumatic SCI (NSTCI) population.

Methods:

A prospective cohort study of adults with confirmed NTSCI recruited between April 2013 and July 2017. Data based on the original van Middendorp CPR were collected from participant's medical records and by interview. The SCIM item 12 was used to quantify the ability to walk at 6 and 12 months. A receiver operator curve (ROC) was utilised to determine the performance of the CPR.

Results:

The area under the ROC curve (AUC) was 0.935 confidence interval (CI) 0.855-1.00, similar to the results of the original study (0.956, 95% CI 0.936-0.976). The CPR predicts who will not walk with a high degree of accuracy (22/23, 96%). It predicts who will walk less accurately (21/29, 72%), particularly for those aged over 65 years (4/9, 44%) vascular diagnosis (4/9, 44%) and those with an AIS C classification (6/11, 55%).

Conclusion:

Overall, the AUC for this CPR performs comparably with previous studies in traumatic SCI. The rule is very accurate in predicting those who will not walk in this cohort. In those it predicts will walk accuracy appears to be impacted by age, diagnosis and injury classification. Further research with larger sample sizes is required to determine if the trends identified in this study are generalisable.

Poster 13

“Horrible imaginings”: anxiety and rehabilitation outcomes in cardiac patients

Wise FM[1,2], Harris DW[3], Sheppard R[1], Beer MA[1], Roberts MA[1].

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Introduction

Anxiety is strongly associated with cardiovascular events and may lead to difficulty adhering to prescribed treatments and making recommended lifestyle changes. *This study aimed to establish the prevalence of anxiety in cardiac rehabilitation patients and its relationship with rehabilitation outcomes.*

Methods

Four hundred and eleven cardiac patients who underwent outpatient cardiac rehabilitation completed demographic questions, an anxiety measure (Hospital Admission and Depression Scale) and 6 Minute Walk Test on admission and discharge. Information regarding return to work and social support was also recorded and body composition was measured. Patients set rehabilitation goals on admission and these were reviewed on discharge. A subset of 210 patients completed a Quality of Life questionnaire (SF-36).

Results

Over one quarter of patients (26.5%) presented with anxious mood on admission. This dropped to 19% by discharge. Anxiety was significantly more prevalent in female than male patients (40% vs 23%; p = .001).

A significantly greater proportion of patients with heart failure were anxious (41%) compared with those following coronary artery bypass grafts (15%; p = .001) or myocardial infarction (25.4%; p = .03).

Compared with non-anxious patients, those with anxiety on admission:

- had significantly poorer exercise capacity (p = .002), higher percentage of body fat (p = .004) and less social support (p =.03).
- suffered significantly poorer quality of life in all domains (p < .001), which persisted at discharge.

Anxiety at discharge was associated with not achieving rehabilitation goals (p = .009). Fewer anxious patients, compared with non-anxious patients, had returned to work by discharge (65% vs. 86%; p = .002).

Conclusions

Anxiety is associated with poorer cardiac rehabilitation outcomes, and is more prevalent in heart failure, a condition where prognosis is often uncertain. Further study is warranted regarding the role of cardiac rehabilitation in reducing the deleterious effects of anxiety on health.

Poster 14

Does silicone sheeting enhance sternotomy wound healing following cardiac surgery? A randomised controlled study

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Introduction

There is a widespread belief that keloid scarring and scar itch post-surgery can be prevented by the use of silicone sheeting. However, this is an expensive treatment option and previous studies of silicone sheeting on sternotomy scars have been poorly designed with susceptibility to bias. In addition, there have been no formal studies of scar management in Australian cardiac patients. This study was conducted to evaluate the impact of silicone sheeting, compared with general wound care advice, on sternotomy wound outcomes following cardiac surgery.

Methods

A prospective, randomised, observer-blinded study was performed on 78 cardiac rehabilitation patients with recently-healed sternotomy scars, who were randomised into either a treatment group (n = 42) with silicone sheeting (Mepiplex) or a usual care group (n = 36). The treatment group applied the silicone sheeting to their scars for up to six months' post-discharge from rehabilitation. Scar assessments were performed at baseline and follow-up using the Patient and Observer Scar Assessment Scale (POSAS). Quality life and mood were also measured.

Results

There was no statistically significant difference in scar parameters between treatment and control groups in the POSAS ($p > 0.05$) categories. In particular, there was no difference between groups in aesthetic outcome using the patients' scores or observers' ratings. Quality of life, anxiety and depression were also equivalent in the two groups.

Discussion

Silicone sheeting had no significant effect on the comfort, appearance and vascularity of sternotomy scars post-cardiac surgery. Patients have equally good outcomes with general wound care advice.

Poster 15

Adherence rates to home exercise programs in older adults following hip fracture: A systematic review and meta-analysis

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Introduction

The aim of this systematic review and meta-analysis is to determine the adherence rates to prescribed home exercise programs in older adults following a hip fracture.

Methods

A PRISMA structured literature search was conducted in three databases. Randomised controlled trials were included, and study quality was assessed using the PEDro scale. Random-effects meta-analysis of participant adherence rates was performed using Stata.

Results

Six studies met the predetermined inclusion criteria. Pooled adherence rates across all included studies was 61% (95% CI 0.53-0.68). In studies where the exercise programs were less than 6 months in duration, adherence rates were 71% (95% CI 0.63-0.79), while studies with exercise programs longer than 6 months had a pooled adherence rate of 55% (95% CI 0.48-0.63).

Discussion

The results of this systematic review and meta-analysis indicate that adherence rates to home exercise programs following hip fracture may be lower in programs that last for more than 6 months. This highlights the need for clinicians to consider the length of their interventions and service provision for older adults following a hip fracture, and how this may impact on their ability to make significant functional improvements.

Poster 16

Better outcomes for children: early identification and intervention through the development and implementation of a comprehensive screening assessment (CSAX) for children and families

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Introduction

The absence of a timely, comprehensive and multi-disciplinary screening assessment following referral resulted in children waiting lengthy periods without assessment of needs, eligibility and risk. Best practice principles in early childhood promote early identification, assessment and intervention in order to prevent and minimize the negative effects of child developmental issues. A quality improvement initiative was undertaken in the Child Youth and Family Team (CYF) to design and implement a comprehensive screening assessment (CSAX) tool that assesses key developmental domains, family functioning and risk, to provide timely access to multi-disciplinary co-ordinated care.

Methods

The quality improvement initiative applied process redesign methodology including best practice research and benchmarking, to develop and pilot a comprehensive assessment tool that assessed key developmental domains, family functioning and risk. The implementation of the tool generated improved processes including a centralised waiting list, specialised triage processing, and regular intake and allocation meetings. The improvement activity was implemented over an 18-month period within the CYF team.

Results

Prior to implementation of the CSAX, wait times for high demand services averaged between 3 - 6 months until initial clinical contact and intervention. Discipline specific assessments were undertaken based on clinician availability and comprehensive screening was inconsistently applied.

Post project implementation, the CSAX tool is administered to new clients by an allocated CYF clinician within 4 weeks of referral. The tool comprehensively assesses key developmental domains, family functioning and risk. The project has also resulted in consistent processes including a centralised waiting list, specialised triage, allocation, prompt and clear referral pathways.

Discussion

The implementation of the CSAX tool ensures that children and families receive timely and comprehensive screening which promotes early identification of needs and addresses risk. This promotes early intervention and enhances family centred care which contributes to better outcomes for children and their families. The project has formalised multi-disciplinary processes and enhanced clinical knowledge and expertise across the CYF team.

Poster 17

Agexchange: bringing together generations

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Introduction

The AgeXchange program has been run by Caulfield Community Health Service since 2015. The program aims to improve the health and wellbeing of children and older adults, create purposeful ongoing exchanges of learning, and foster meaningful interactions across generations. To date, the program has been successful in the community. To ensure its ongoing effectiveness, a review was undertaken.

Process

A comprehensive evaluation of the program's processes was undertaken. This included: process evaluation of roles and responsibilities, volunteer recruitment, participant surveys and session plans.

As a result, these areas were identified for development:

- roles and responsibilities of project team members
- volunteer recruitment
- session plans

A project plan was devised to clearly outline each phase of the program and each project team member's responsibility. It was identified that volunteer recruitment was important to the program and volunteers were given a personalised phone call and information pack upon recruitment.

Outcomes

The program is currently running and as of 27th June:

- nine sessions will have been run; and
- approximately 17 participants will have attended on average per session

Feedback to date indicates that changes made to the program have been successful:

- The personalised phone call established a rapport between the project team and volunteers:
  "I really appreciated the phone call, it made me feel welcome"

- Volunteers have expressed enjoyment in their role
  "I really like being here, I don't have grand-children so I have loved being involved with the children and residents with the activities, it's a lot of fun"

- Feedback about the project plan has been positive
  "It was great to have a detailed project plan with dates and activities and clear communication"

Discussion

Initial evaluation indicates that resident participation rates vary according to unpredictable health and wellbeing. The Population Health Team is monitoring these variables using health promotion process evaluation methods.

Poster 18

Life café (pilot study): a move from knowing to doing to improve quality of life for older adults

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Introduction

Life Café *(Monday Morning Discussion Group)* is a group for older adults to empower change and improve quality of life. Originally developed in Sweden, the program aims to influence habits and patterns by providing the new arena for meeting to exchange experiences, thoughts and knowledge.

Method

CCHS recruited Healthy Living Program participants who identified gaps in their current situation and proposed the following themes for discussion:

- Falls
- Self-Care
- Acceptance of Age and Physical Inabilities and Living Skills
- Loneliness
- Navigating through the medical system and aged care system
- Women's health and Men's health

Participants were encouraged to reduce their identified gaps through their life café conversations. Three questions were asked to focus conversations.

1) What are we trying to achieve for ourselves?
2) How will we know that the change is an improvement?
3) What changes can we make that will result in an improvement?

Participants confidentially shared their own experiences and learnt from each other. Clinical experts were invited when identified by the participants.

A Developmental Evaluation approach was used to reflect upon the impact of the program.

Results

Between 4-16 people attended each session.

Learning about someone's experiences and gaining knowledge was rated the most impactful aspect of the sessions.

- "The sessions I attended were very positive and open a few directions for me"
- "Not to be shy in seeking advice/help"
- "To be able to speak up and talk more to other"

Discussion

Participants were engaged in meaningful conversations which acted as catalyst for change in habits and patterns. The accomplishment of program also echoed the importance of "learning with peer's" model.

Conclusion

The Health Promotion Team is exploring avenues to empower the community to take ownership of the program and continue working on individual's motivation and empowerment to improve quality of life.

Poster 19

Evaluation of a model of care utilising allied health assistants to monitor nutritional status in inpatients in a subacute hospital

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Introduction

Malnutrition affects 1 in 3 inpatients at Caulfield Hospital (BMI PUPPS Audit, 2018). Current dietetic resources are inadequate to provide safe and effective intervention to all referred patients. Incidents related to 5% weight loss identify frequency of nutrition review as a primary contributing factor (Riskman Data, 2016-2019). The same data identified inadequate weight monitoring and inadequate escalation of nutrition therapy as contributors to hospital acquired malnutrition.

Caulfield Nutrition implemented a pilot model of care utilising Allied Health Assistant (AHA) resources to support the clinical work of the dietitians. The goal was to evaluate if additional AHA resources and streamlined nutrition care processes would mitigate the risk of hospital acquired malnutrition.

Methods

Over a 4-week period, AHA resources were increased from 32 to 64 hours per week. Streamlined processes were implemented to monitor patient's nutritional status, identify patients with deteriorating nutritional status and escalation to dietitian as required. Objective outcome measures were occasions of service, frequency of nutrition review, and escalation of nutritional therapy. A secondary outcome measure was the number of 5% weight loss incidents reported in this period.

Results

A total of 71 patients were seen by the Nutrition Assistants. Occasions of service for the nutrition assistant role were increased by 162% (mean per week was 16.8 in the standard model of care versus 44.4 in the pilot). The frequency of nutrition review increased by up to 300% (range of 0-1 per week in standard model of care versus 1-3 in the pilot). Twenty-seven per cent (n=19) of patients were escalated to the dietitian for more complex interventions. No Riskman incidents related to 5% weight loss were reported during the pilot phase.

Discussion

A pilot model of care utilising AHA recourses was effective at mitigating nutritional risk and preventing hospital acquire malnutrition. This model represents a safe, cost effective and efficient method to improve the monitoring of subacute hospital inpatients' nutritional status.

Poster 20

Stoma education for the older person is about keeping it simple as 1, 2, 3

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Overview

Australia's aging population presents unique hurdles when planning, providing care and educating new ostomate's; and these variations to care differ greatly depending on the individual. Whilst there are many predictors to flag potential issues, and well planned out pathways for the stoma's physical journey; this is aimed at highlighting the often overlooked and under documented complexities encountered as we navigate patients in the transition to home. This is an example of how not all complications and barriers to discharge are due to the stoma, the output, or any medical issue. It is about the patient's ability to self-manage.

This follows the journey of a non-English speaking background patient transferred from the acute setting to Rehabilitation. She was struggling to manage her colostomy appliance, which could put her and her husband with dementia into residential care. The ability to self-manage a stoma is often the defining factor to an aged person's ability to return to their lives at home or placed into formal care. Her motivation to prevent placement was demonstrated by her readiness to learn.

As a Stomal Therapy Nurse, it is our responsibility to identify the barriers to self-care, adapt product selection and implement the most achievable goals. The patient's specific goals and the interventions produced to achieve these; were individualized so that she is able to return home to continue to live her life; and not dictated by her new stoma.

This idea meant that the concept of self-care had to be as simple as 1, 2, 3.

Poster 21

Feasibility of an upper limb implementation package for neurological rehabilitation: a pilot clustered longitudinal cohort study

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Introduction

Hand and arm activity after stroke and other brain injuries improves with evidence-based upper limb rehabilitation. However, therapists face known barriers when providing evidence-based rehabilitation and require support to implement clinical practice guidelines. To investigate the feasibility and effectiveness of providing implementation packages to occupational and physiotherapists to improve guideline adherence, and to monitor outcomes in patients arm/hand being treated by participating therapists

Methods

Using a non-randomised clustered longitudinal cohort design, occupational and physiotherapists were allocated to one of three groups: (a) facilitator-mediated implementation package, (b) self-directed implementation package, or (c) usual care (control); we recruited n=1inpatient and n=1 outpatient site per group. Primary outcomes of feasibility and adherence to guidelines (assessed through medical file audits), and secondary outcomes of patient safety and upper limb outcome (Box and Block Test, Fugl-Meyer Upper Extremity Assessment and weekly minutes of practice) were collected at baseline and after 3-months of intervention.

Results

29 therapists and 55 patients participated. Therapists in the facilitator-mediated group demonstrated improved guideline adherence (28.6% improvement (95% CI 21%-36%)) and reported the intervention to be acceptable, time-feasible, and perceived it to improve their skill and confidence in upper limb rehabilitation. Therapists in the self-directed group improved guideline adherence by 3% (95% CI -1-7) and requested more guidance for their implementation. There were no patient safety concerns in the facilitator-mediated group despite these patients increasing their weekly minutes of upper limb practice by up to 187 (95% CI -11-385) mins/week

Discussion

A facilitator-mediated implementation package was acceptable to clinicians working in stroke rehabilitation, and safe for the patients. An adequately powered study is planned to understand how to support clinicians to provide evidence-based upper limb rehabilitation after stroke.

Poster 22

Does attending geriatric clinic consultations via telehealth from aged care facilities enhance the patient experience?

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Introduction

In September 2018 the Caulfield Hospital Geriatric Clinic established a telehealth service for frail older adults living in metropolitan Residential Aged Care Facilities (RACFs) to increase access to specialist Geriatrician services and improve efficiency in the way health care is delivered for this vulnerable population.

Methods

Eligible patients suitable for telehealth attended Geriatrician review consultations via telehealth. Consultations were supported by RACF staff and GPs were invited to attend based on patient needs. Experience and satisfaction surveys were completed following telehealth consultations by patients, Geriatricians, RACFs and GPs.

Results

Between September 2018 - April 2019, 15 patients attended RACF supported consultations via telehealth with 6 Geriatricians. Three GPs participated in 40% of consultations.

Of the 9 patient survey respondents, 89% identified choosing telehealth due to difficulties with travel and mobility. 67% reported telehealth also reduced the travel burden experienced by family and friends. 100% reported feeling satisfied with the standard of care received during their telehealth consultation. 100% were willing to use telehealth again for future consultations.

Geriatrician survey results (n=4) show 100% of Geriatricians felt the technology was easy to use, 80% reported telehealth enabled multidisciplinary team members to be involved in discussions relating to ongoing care and management. 75% felt patients were more eager to use telehealth than anticipated.

Two GP and two RACF survey respondents felt telehealth improved communication and collaboration with the Geriatrician, GPs could facilitate more timely recommended changes to care, and ongoing care was able to be provided locally by the GP and RACF staff.

Discussion

For frail older adults, attending Geriatric Clinic consultations via telehealth from RACFs has been an acceptable alternative and value-adding way of accessing specialist care. Telehealth has enhanced the patient experience by reducing travel burden, and increasing communication and collaboration between Specialists, RACF staff and GPs.

Poster 23

Making OHS Easy

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Introduction

Carer Services is based at Caulfield Hospital and has offices in Dandenong and Frankston. Keeping track of OHS compliance checks was a challenge with each site having their own activities to conduct regularly and different ways of recording, storing and monitoring tasks and issues. This project set out to engage administration staff, streamline and centralise OHS compliance activities, and develop a consistent, sustainable system.

Methods

The Project Officer, Office Manager and Administrative staff:

- reviewed and documented current system for conducting OHS compliance checks at the three sites.
- developed a central list of all compliance activities and the frequency they were required to be conducted.
- designed a simple, easy to use process for recording all OHS checks
- implemented new system across the service.

Results

Carer Services now has an OHS Audit schedule, consistent templates and methods of tracking it’s OHS compliance activities. These records are centralised and it’s easy to see what needs to be done, by whom, when, the follow up required and completion dates**.**

Discussion

At the beginning of the project, the task was significant given the disparate systems and preferences for capturing the information. There was lots of information to sift through, stored in multiple locations, and some staff were unsure of changing work practices, concerned that information would be lost, preferring manual and localised methods for compliance tracking. This project utilised an understanding of change management, staff engagement in change and the ability to implement a new effective system with staff support.

Poster 24

Systems thinking – from theory to practice

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Context

In 2017, Victorian Community Health Services were mandated to adopt systems thinking and place-based approaches in the delivery of health promotion. Caulfield Community Health Service's systems thinking journey has shifted from grappling with systems thinking theory, to action and practice. It was challenging translating systems theory into tangible health promotion practice. Engaging our multidisciplinary (health promotion and clinical staff) team, who have varied expertise in complex systems theory, was challenging.

Process

The CCHS Health Promotion team created a shared understanding of 'placed-based/systems thinking approaches', including what this means for our team, our work, and our local community. The team adopted a systems change framework from The Australian Partnership Prevention Centre (TAPPC), minimised jargon, incorporated 'everyday systems practices' into daily tasks and reflected on mental models/work practices. A 'Systems Thinking in everyday practice' course was completed to ensure and reinforce the practical application of place-based systems thinking.

Analysis

The decision to move from systems theory to practices involved simplifying our work into 4 categories outlined in the TAPPC Systems Change Framework: defining the situation, gaining clarity, finding leverage and acting strategically. These categories guided our transition; implementing practical approaches led us through an in depth exploration of our community using a systems thinking lens.

Outcomes

The local community and stakeholders have been engaged using group model building sessions to explore issues using place-based systems thinking principles. The health promotion team and clinical staff are now increasingly confident working across whole systems and using place-based approaches to drive systems change.

Poster 25

Get dressed, get moving, get BETTER!

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Introduction

Hospital associated deconditioning is a problem for older adult patients, in whom significant bed rest can lead to deterioration in multiple physiological systems. The result is functional decline and loss of independence, increased length of stay and adverse events, and decreased likelihood of returning home.

Methods

As part of a state-wide implementation, the Caulfield Hospital working group has used the IHI quality improvement methodology to apply and assess ward based interventions to try and improve the numbers of patients getting dressed and moving on the Aged Care wards daily. Interventions trialled to date include data displays, discussions with point of care staff, patient pedometers, and a pop-up shop for clothing provision.

Results

Baseline data indicates that on average 35% of patients across the Aged Care wards are dressed daily. On average, 66% of them have mobilised prior to 2pm every day. Our early experience indicates that patients and staff are receptive to trialling interventions. There are educational needs for all groups in relation to hospital associated deconditioning.

Discussion

Complex iatrogenic complications, such as hospital associated deconditioning in the older adult, require complex multifaceted interventions to address them. We are working collaboratively across the Aged Care wards and with state-wide partners to see if we can make a difference for our patients.

Poster 26

Does an outpatient hip fracture clinic meet previously unmet care needs?

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Aims

The care of older people with hip fractures involves managing multiple issues following hospital discharge. We developed a multi-domain outpatient clinic to address these issues and aimed to describe the characteristics and issues identified in the first eight months of the service.

Methods

We designed a clinic to assess all people not discharged to a nursing home >65 years of age admitted with a minimal trauma hip fracture and used a standardized assessment template to collect data regarding bone health, falls, cognition, mood, advance care planning and patient reported outcome measures 4 weeks post discharge. We used simple summary statistics to describe the characteristics of attendees/non-attendees and the nature of the issues addressed in clinic.

Results

A total of 39 were awaiting to be seen at the time of writing, 21 people attended the clinic and 30 did not. Clinic attendees were older (median age 80 years vs 77 years), tended to require rehabilitation (90% vs 62%) and spent a longer time in subacute care (median length of stay 25 days vs 22 days) than non-attendees. The clinic commenced 63% (7/11) of patients on new anti-resorptive medication, performed falls interventions in 47% (10/21) and referred 52% (10/19) for advance care directive completion.

Conclusions

Despite recent rehabilitation admission, a post discharge clinic identified and addressed gaps in care and follow up in minimal trauma hip fracture patients. Further research is needed to ascertain whether this will translate into improved clinical outcomes and patient satisfaction after hip fracture.

Poster 27

Setting the bar – establishing Australian and New Zealand benchmarks to improve services and outcomes for people experiencing chronic pain

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Aims

The electronic Persistent Pain Outcomes Collaboration (ePPOC) aims to improve services and outcomes for chronic pain sufferers. Involving over 60 chronic pain management services (PMS), collecting standardised outcome measures from over 50,000 patients through treatment. A primary function is development and implement benchmarks for pain management services for quality service improvement. This poster describes the process undertaken to develop benchmarks, use since implementation in 2016 and new benchmark developments.

Methods

Initial benchmarks were developed from consultation with participating PMS and stakeholders in Australia and New Zealand. This involved defining the criteria to set relevant benchmarks. The criteria required: clinically relevant domains, evidence demonstrating a domain was amenable to intervention, the threshold reflecting good rather than average practice, the benchmark applied to all services regardless of role delineation or funding, and benchmark calculations would include only patients with baseline scores of at least moderate severity. Finally, benchmark thresholds were determined by analysis of data collected to date, and agreement of participating PMS and stakeholders. Thresholds were to be aspirational, and set such that only 30% of PMS were currently meeting them. Benchmark data was collected from over 50,000 patients who attend over 60 PMS in Australia and New Zealand.

Results

Seven clinical and one service-related benchmark were established. The clinical benchmarks relate to patient outcomes measured from referral to end of “episode of care” for patients reporting at least moderate severity of the domain at referral.

The seven clinical benchmarks with clinically significant change should be achieved by the following percentage of patients on the associated domain: 30% of patients (average pain); 50% (pain interference)(BPI); 60% (depression); 50% (anxiety); 60% (stress)(DASS21); 60% (pain catastrophising)(PCS); and 60% (pain self-efficacy)(PSEQ). The service benchmark relates to patient waiting time, and states that 80% of episodes of care should begin within 3 months of the referral.

Initial determining and implementation of ePPOC benchmarks occurred in 2016. Benchmark results are reported confidentially to individual services. Those who choose to do so, can compare outcomes relative to the national benchmark, and to other services in ePPOC. Benchmarking workshops have facilitated quality improvement initiatives. Services are able to learn from those achieving outstanding results in particular domains. At Australian and New Zealand level, benchmarks allow the determination of clinical variation between services on each domain. While implementation of the benchmarking system is relatively recent, we have already witnessed a reduction in variation of outcomes across PMS, particularly in pain interference, depression, pain catastrophising and pain self-efficacy. Additionally, since their establishment, a steady shift towards all of the benchmarks by the group of services (approximately 70%) who are not currently meeting them has been observed. Development of these benchmarks continues. In late 2017, a new benchmark related to overall reduction in opioid use from referral to episode end was introduced with a target of 50% reduction.

Conclusions

The benchmarks developed by ePPOC, and agreed to by the Australian and New Zealand pain management sector provide means of ‘setting the bar’ for improving quality of care and patient outcomes within individual services and nationally. With the large number of patient and service data we have already seen a steady shift towards more services meeting all benchmarks by reviewing their service delivery models, which can be shared in workshops and individually as described. The monitoring of current and development of new benchmarks to improve care for those suffering chronic pain remains a dynamic process.

Exploring Characteristics and Outcomes of a Community Rehabilitation Upper Limb Group for Stroke Survivors

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Background

The National Stroke Foundation Guidelines (2017) recommends that stroke survivors with reduced upper limb function be provided with intensive upper limb therapy tailored to the individual's activity and occupational needs. At Alfred Health Community Rehabilitation, upper limb therapy was previously provided by Occupational Therapists (OT) in a one to one model. In response to growing evidence and demand, the need for an additional mode of upper limb therapy became evident and necessary. There is limited evidence available to guide community therapists on the best methods of delivering upper limb rehabilitation, how to increase intensity through group programs.

Aim

To identify client characteristics and report on upper limb outcome measures recorded for stroke survivors who attended a community rehabilitation upper limb group run by OT.

Method

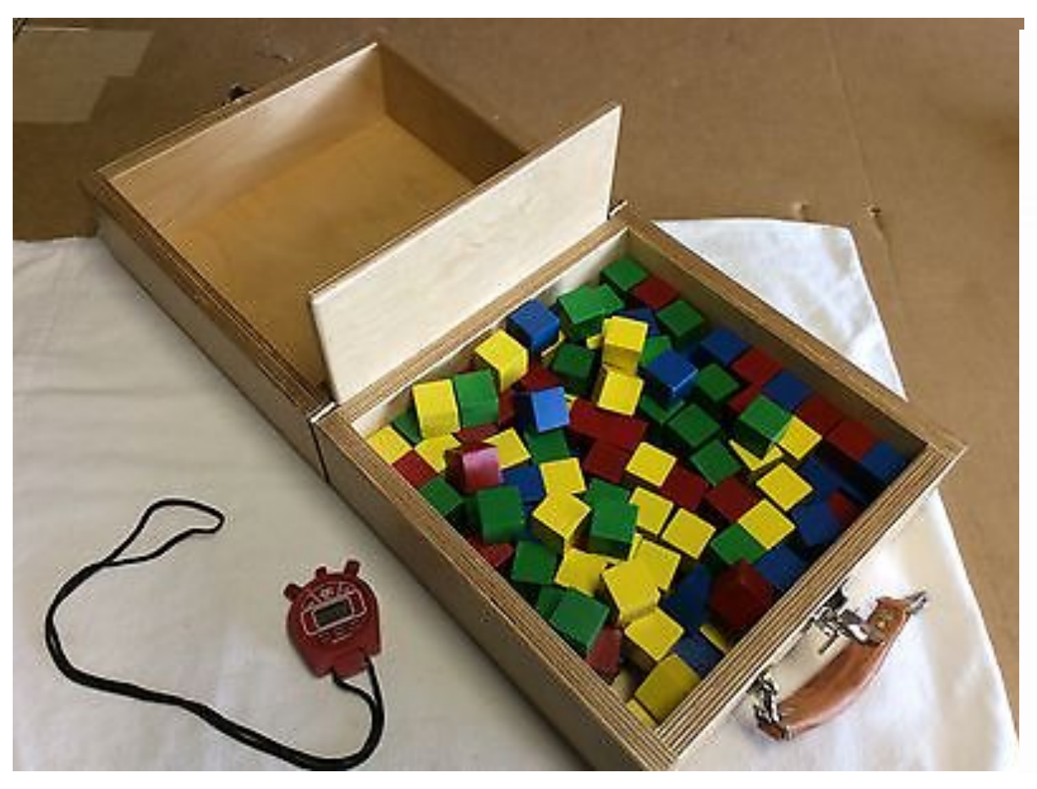
Design: Retrospective cohort study of N= 27.

Setting: Stroke survivors who attended a community rehabilitation program upper limb group weekly between October 2012-July 2015.

Data collection: Demographic details were extracted from medical records alongside upper limb outcome measurement scores completed on referral and discharge to the group.

Outcome measurements:

Motor Assessment Scale (Items 6,7, 8)	• Performance-based scale that assesses everyday motor function • Task-oriented approach that assesses performance of functional tasks rather than isolated patterns of movement
Box and Block Test	• Measures unilateral gross manual dexterity • Max number of blocks moved from one compartment of box to another in 60 seconds
9 Hole Peg Test	• Assesses finger dexterity. • Pegs moved from container, one by one, and placed into the holes on the board as quickly as possible
JAMAR and Pinch Dynamometer	• Measures isometric muscular strength of hand grip and pinch • Scored using force production in kilograms
Pain Visual Analogue Scale	• Measure of pain intensity. • Continuous scale comprised of a horizontal scale of 10



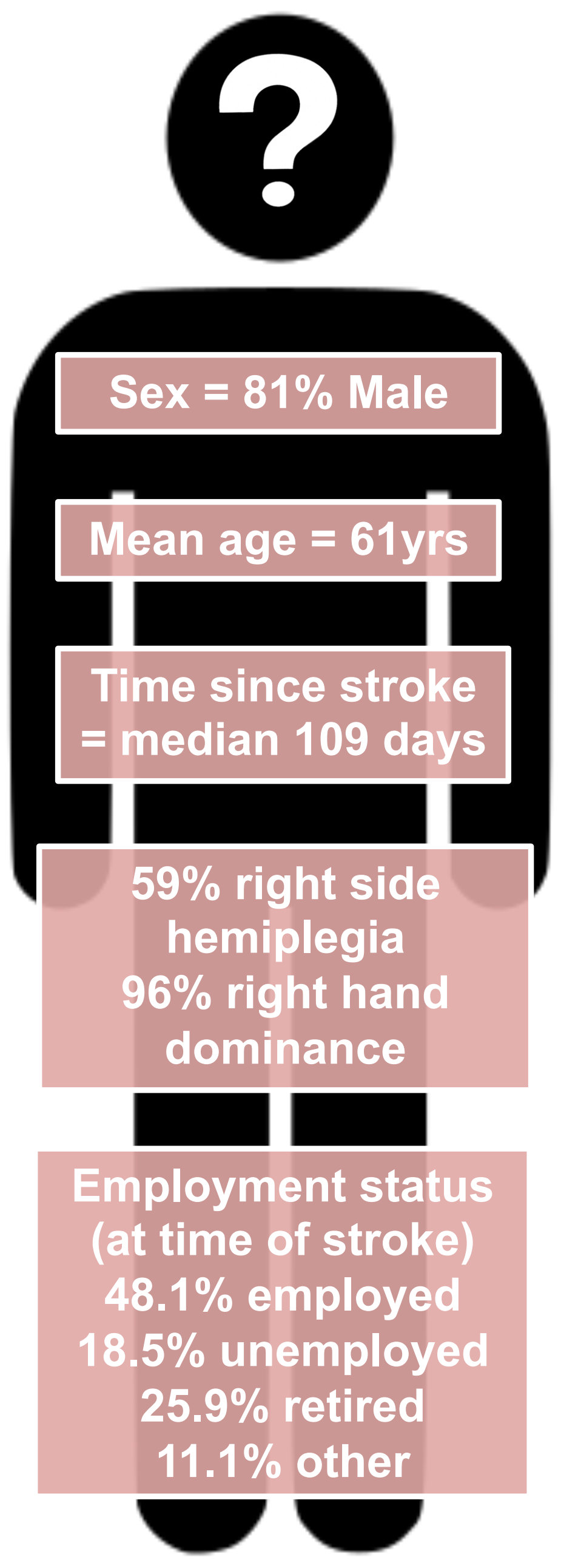
Analysis

Descriptive statistics, including means and percentages were used to compare participant characteristics. For the continuous outcome measure data, means and standard deviations were calculated and paired t-tests were used to evaluate change in upper limb function (strength, dexterity and pain).

Results

Demographic and stroke characteristics

- Majority of participants had an ischaemic stroke (n = 18, 67%).
- One-third were referred early post stroke (n = 10, 37% 90 days or less).
- 88.8% were classified as having a slight to moderate disability as measured using the Modified Rankin Scale.
- Mean age was 61 years (range: 24 to 93 years).
- Majority of participants (n=20, 74%) were driving prior to their stroke however none had resumed driving at the point of referral to the group.
- Just over half the participants were independent with transport to the group (e.g. public transport, taxi).



Sex = 81% Male

Mean age = 61yrs

Time since stroke = median 109 days

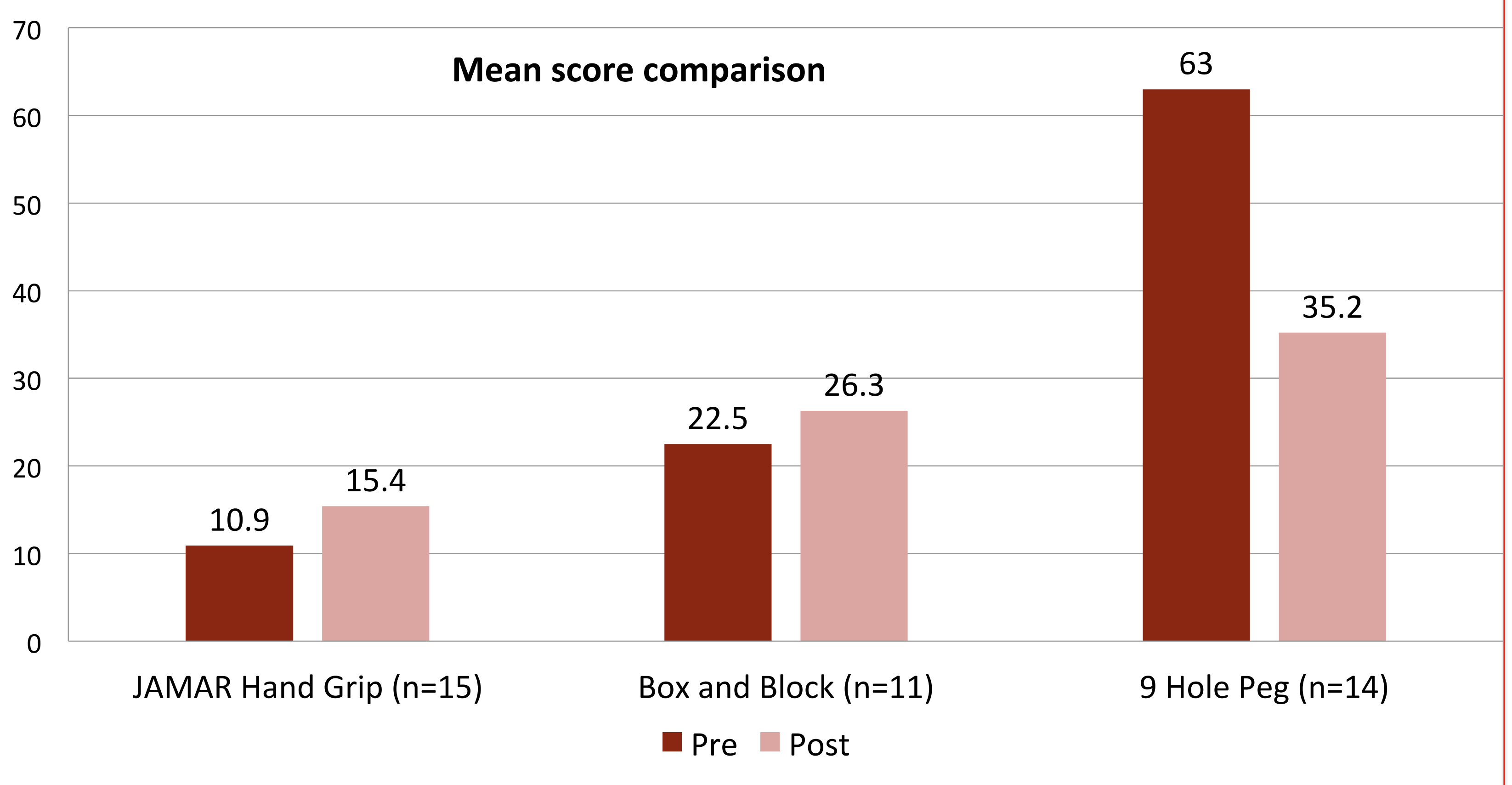
59% right side hemiplegia
96% right hand dominance

Employment status (at time of stroke)
48.1% employed
18.5% unemployed
25.9% retired
11.1% other

Severity of stroke (Modified Rankin Scale)	• 44.4% Slight Disability • 44.4% Moderate Disability • 11.1% Moderately severe disability
Driving	• 74% driving pre-stroke • 100% not driving at point of referral
Group Attendance	• Mean of 14 weeks • Mean of 11 sessions
Mode of Transport to group	• 52% Independent • 48% Carer/Family/Friend

Upper Limb Outcome Measures

- Improvement evident across pre and post test mean score comparison on all measures.
- Most significant improvement in mean score measured in: Box and Block, 9 Hole Peg Test, JAMAR hand grip and Motor Assessment Scale item 8.
- Statistically significant change as indicated by p values in: JAMAR hand grip and Motor Assessment Scale.



Conclusion

This study provides valuable baseline information that describes the characteristics of stroke survivors who attended a community based upper limb group. Post group outcome measures reveal improvements in strength, dexterity and fine motor performance. These preliminary findings demonstrate that an upper limb group in a community setting is an effective and efficient method of maximising the intensity of upper limb therapy in line with The National Stroke Foundation Guidelines (2017).

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Who are the patients with stroke who are admitted to GEM?

A comparison with Rehabilitation and ABI

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Introduction

Patients admitted with stroke to Caulfield Hospital may be treated in one of three locations:

- GEM (Geriatric Evaluation and Management) wards (ACG, AC1, AC2, AC3)
- Rehabilitation wards
- ABI (Acquired Brain Injury) unit

There is limited information locally, and in the literature about differences in the unique characteristics and outcomes of patients admitted to GEM wards.

Hypothesis

Admission characteristics and outcomes of stroke patients treated on GEM wards will be different to those in Rehabilitation and ABI units.

Methods

Two-year retrospective audit of electronic medical records for all stroke admissions to Caulfield Hospital during 2014-2015 (primary diagnosis according to ICD10 code). Data for GEM, Rehabilitation and ABI groups were compared using Kruskal-Wallis Non-Parametric Tests (Chi square analysis for discharge destination). Statistical testing threshold was set at $p<0.05$. Data collected on each participant included:

Admission characteristics

- Demographic data
- Charlson Comorbidity Index (CCI),
- Functional Independence Measure (FIM)

Outcomes

- Length of stay (LOS)
- FIM change (D/C FIM - admission FIM),
- Allied health therapy (total minutes/LOS)
- Discharge destination

Results

Data was collected for 289 stroke admissions to Caulfield Hospital. Patients with stroke admitted to GEM wards were older than those admitted to both rehabilitation and ABI. Their comorbidity index and LOS were similar to Rehabilitation and different to ABI. Their functional level at admission and change of functional level at discharge was lower than Rehabilitation and similar to ABI. Gender and diagnosis (infarct vs. haemorrhage) was similar in all groups, except for ABI which had more (but not statistically sig.) males and haemorrhages than the other groups.

Table 1. Group Characteristics (GEM, Rehabilitation, ABI)

	GEM n= 70		Rehab n= 170		ABI n= 49	
	Median	**IQR**	**Median**	**IQR**	**Median**	**IQR**
Age (years)	85 *	81-89	71	58-79	49	42-59
Charlson Comorbidity Index	3 ◆	2-4	3	1-3	1	1-3
Total Admission FIM (range 18-126)	36 #	18-68	73	46-91	34	20-60
Admission FIM Cognition (range 5-35)	11 #	5-21	25	18-29	11	6-19
Admission FIM Motor (range 13-91)	19 #	13-47	48	25-64	19	13-42
Total Discharge FIM (range 18-126)	43 #	25-89	108	90-117	54	24-99
FIM efficiency (FIM change/LOS)	0.2 #	0-0.8	1.0	0.4-1.7	0.3	0.0-0.7
	n	**%**	**n**	**%**	**n**	**%**
Gender Female	36	51	97	57	16	33
Infarct (vs. haemorrhage)	51	73	139	82	32	65

* Different to Rehab and ABI
\# Different to Rehab only
◆ Different to ABI only

Chart 1. Length of Stay

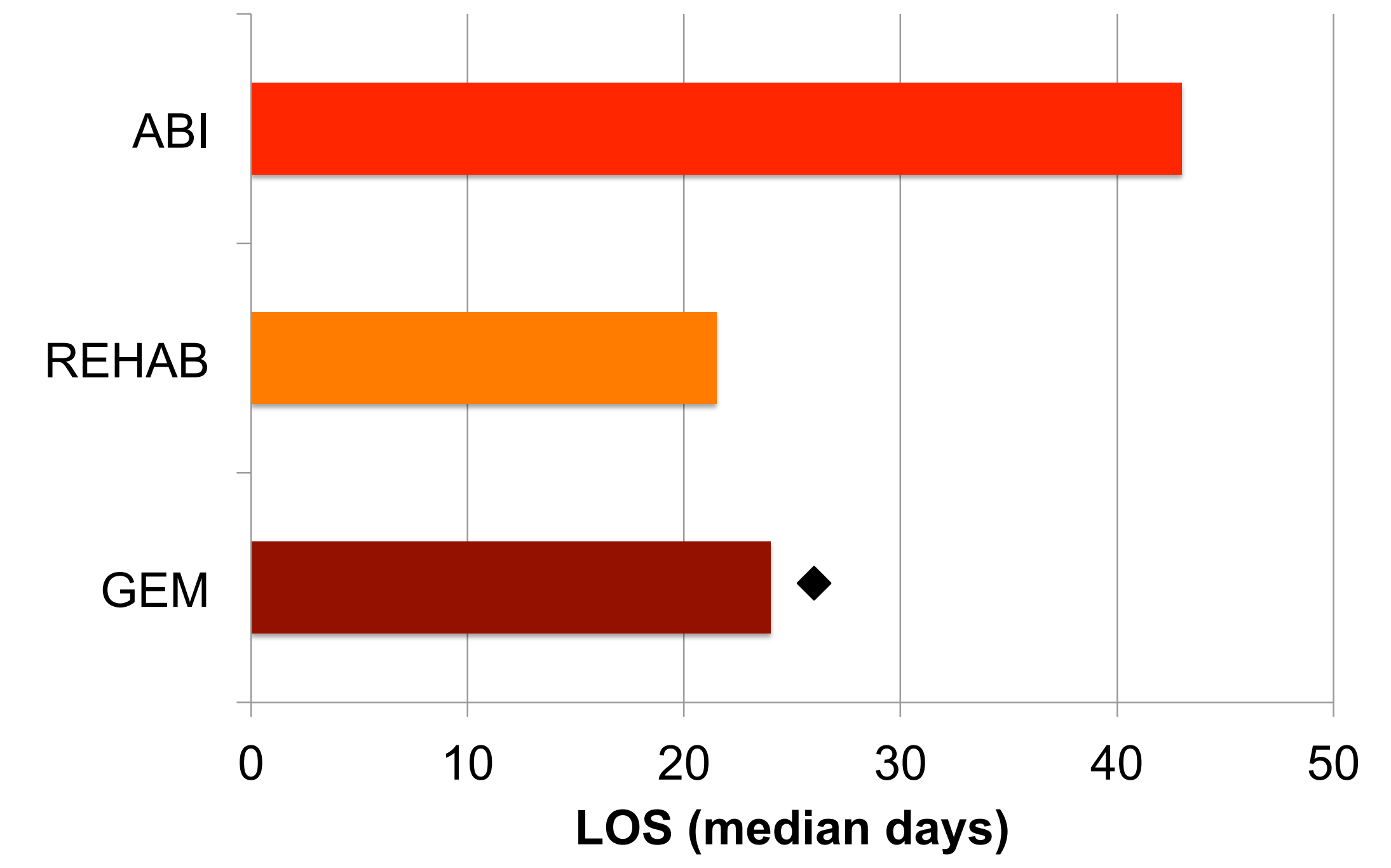


Chart 2. Allied Health Therapy and FIM Change

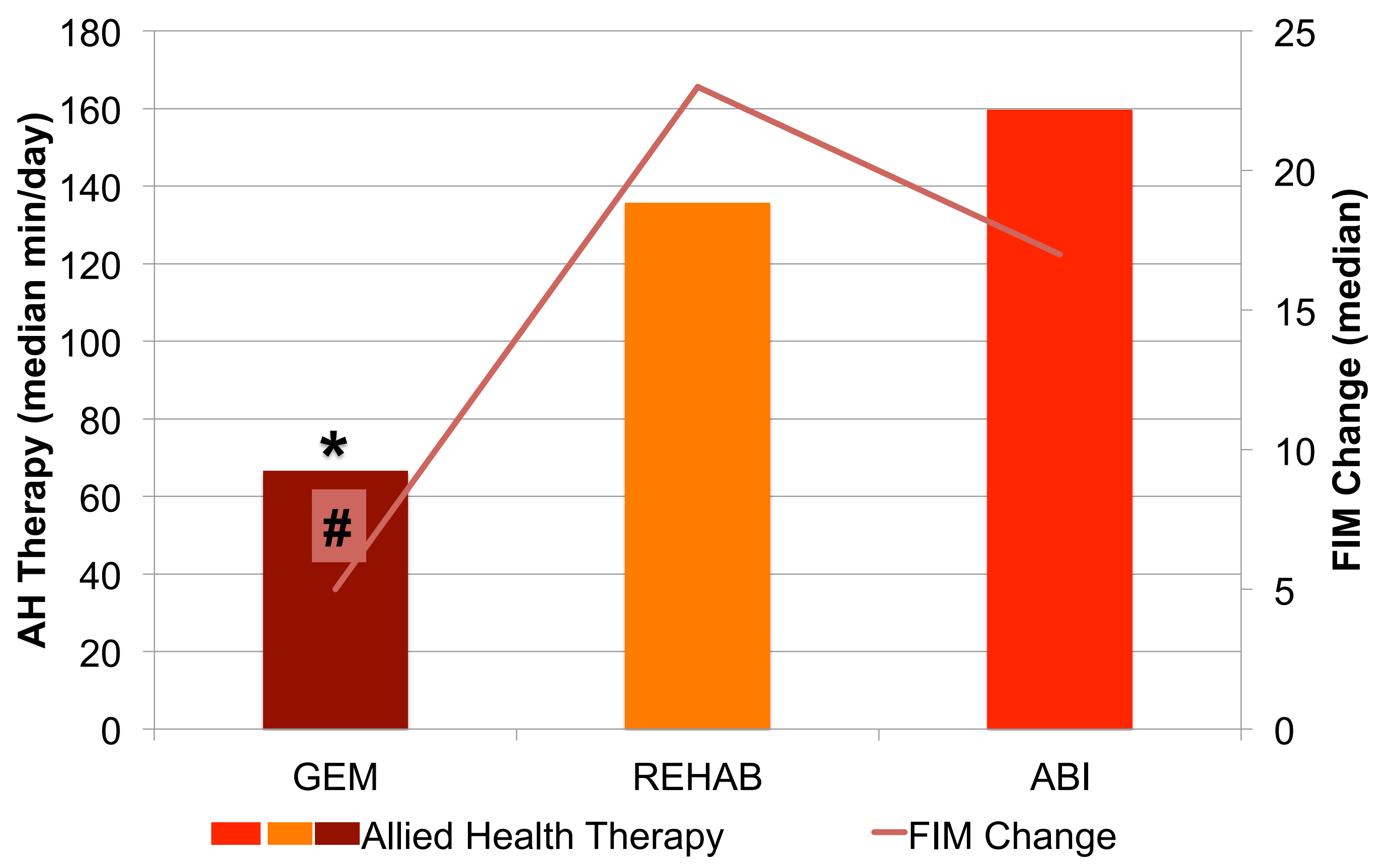
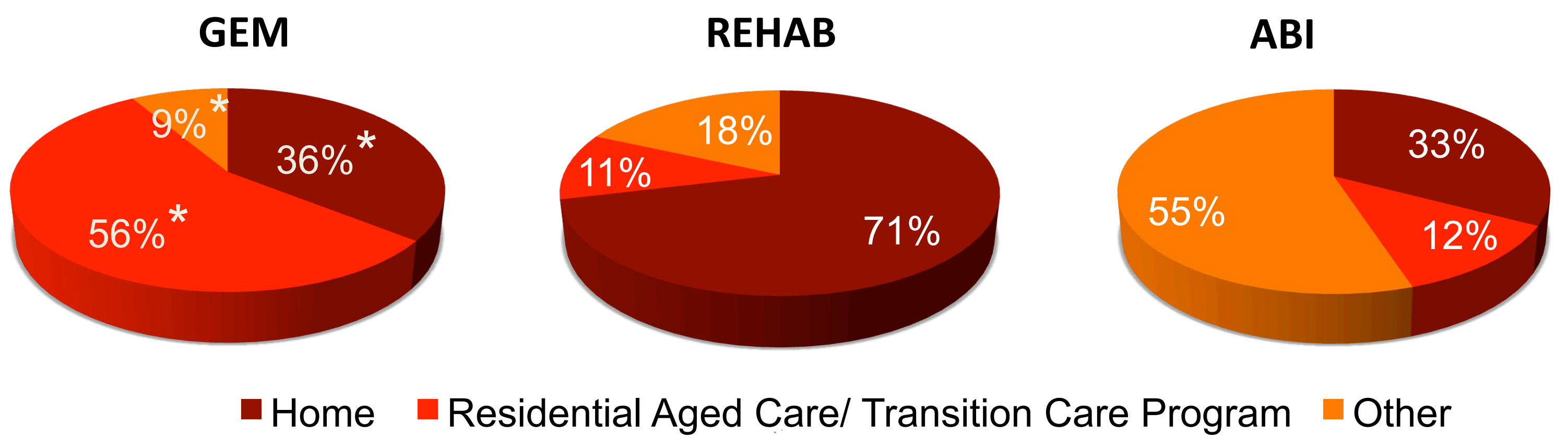


Chart 3. Discharge Destination



Discussion

Stroke survivors admitted to GEM wards at Caulfield Hospital were significantly older than those on rehabilitation and ABI units, received less therapy and were less likely to discharge home.

The characteristics of stroke admissions to GEM and rehab were more similar than GEM and ABI. Furthermore, the funding and service model in ABI is significantly different, therefore the comparison between the rehabilitation and GEM groups was more meaningful.

GEM patients were much older than those in rehabilitation, their admission FIM was substantially lower but their comorbidity index was similar. Stroke patients in GEM and rehabilitation had similar LOS, however their input (allied health therapy) and outcomes (FIM change and discharge destination) were very different.

There is evidence that older patients with stroke can still show functional improvement with rehabilitation and have good outcomes [1,2,3,4]. Therefore, it is unclear whether GEM patients with stroke could have tolerated more therapy and if so, would have this resulted in better outcomes? Furthermore, what was the role of admission characteristics (older age, lower FIM, poorer cognition) on the GEM patients ability to improve? To answer these questions we plan a multiple regression analysis that may highlight possible prognostic indicators and inform future research into treatment of patients post stroke in GEM wards. An interventional study or RCT would be required to answer these questions definitively.

Conclusion

Stroke survivors admitted to GEM wards were older, had lower motor function and cognition, but had a similar comorbidity index than those on rehabilitation wards. Despite a comparable LOS they received less allied health therapy, made less functional gains and had poorer outcomes.

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Instrumental gait analysis parameters for assessing lower limb spasticity: a systematic review

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Introduction

Upper motor neuron lesions may cause **spasticity (impairment),** which in turn may affect **walking (function).** Yet, it is unclear which aspects of walking are effected by spasticity.

Instrumental gait analyses (GA) provide detailed and sensitive analysis of walking, by examining three groups of parameters:

- **Spatiotemporal** – e.g. step length, time spent in single leg support
- **Kinematic** – e.g. angles of the knee joint during gait
- **Kinetic** – e.g. forces exerted by the knee muscles during gait

Aim

To conduct a systematic review to identify the parameters used in instrumental GA for assessing adults with lower limb spasticity.

Methods

Data bases searched: Medline, EMBASE, CINAHL, AMED, Cochrane and PEDro.

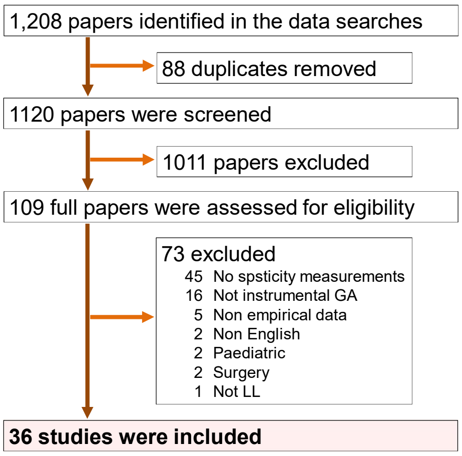
Search strategy: Two search concepts, instrumental GA and spasticity, were mapped for key terms and words. For each data base concepts were searched individually and then combined.

Inclusion criteria: empirical studies, adult participants, participants affected by spasticity, reported measurements of lower limb spasticity and instrumental GA.

Exclusion criteria: interventions or history of orthopaedic surgery, GA studies published before 1991 and non-English manuscripts.

Data extraction: At least two independent investigators reviewed each paper, and rated its quality (Quality Assessment Tools-NIH: good/fair/poor).

Results



1,208 papers identified in the data searches

88 duplicates removed

1120 papers were screened

1011 papers excluded

109 full papers were assessed for eligibility

73 excluded
- 45 No spsticity measurements
- 16 Not instrumental GA
- 5 Non empirical data
- 2 Non English
- 2 Paediatric
- 2 Surgery
- 1 Not LL

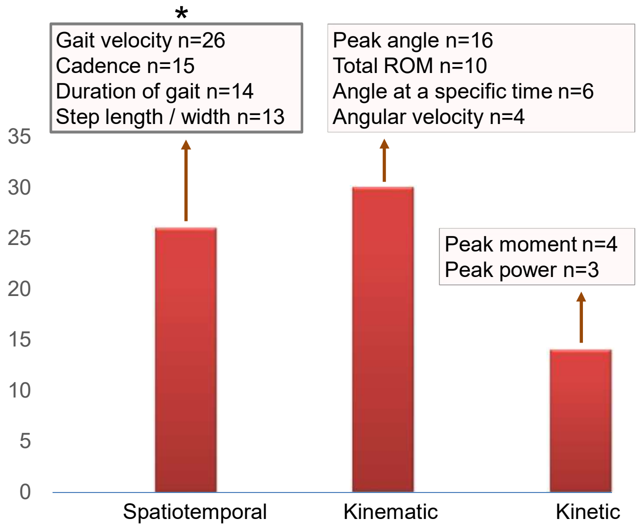
36 studies were included

A total of 736 participants took part in the 36 studies. Participants were affected by: Stroke n=459, Hereditary Spastic Paraplegia n=102, Traumatic Brain Injury n=65, Spinal Cord Injury n=46, Other n=64

Study categories and quality of study methodology:

Study type		Good quality	Fair quality	Poor quality
Pre-post intervention	n=17	4	12	1
Observational	n=14	1	11	2
Controlled intervention	n=4	3	1	
Case Study	n=1			1

Gait parameters used to study spasticity



* Statistical significant correlation between spatiotemporal parameters and spasticity.

Muscles tested for spasticity were:

- Plantar flexors n=26
- Knee extensors n=14
- Hamstrings n=6
- More than one muscle group n=10

Spasticity **assessment tools** used were:

- Modified Ashworth Scale (MAS) n=32
- Modified Tardieu scales (MTS) n=5
- Other tools n=5
- More than one assessment tool n=6

Discussion

Variety of study designs, quality of studies and the gait parameters were used to evaluate spasticity with instrumental GA. The most commonly studied gait parameters were spatiotemporal and kinematic.

Correlation between spatiotemporal parameters and spasticity suggests that spasticity does affect walking parameters. Evidence is less clear with regards to kinematic parameters. Kinetic parameters were too variable to enable meaningful comparison.

Plantar flexor spasticity was the most commonly assessed muscle group. Assessment often lacked muscle specificity, and testing of multiple muscles. The Modified Ashworth Scale is commonly used for assessing spasticity, despite its lack of differentiation between resistance to rapid and slow muscle lengthening.

Conclusion

Spasticity appears to adversely affect walking, in particular **spatiotemporal parameters.** Evidence is less clear with regards to **kinematic parameters**.

This systematic review also highlighted the **lack of systematic approach** to assessing lower limb spasticity.

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DEVELOPMENT OF A SENSORY MODULATION PATHWAY WITHIN ACQUIRED BRAIN INJURY REHABILITATION

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BACKGROUND:

Sensory modulation is the "neurological ability to regulate and process sensory stimuli; this subsequently offers the individual opportunity to respond behaviourally to the stimulus" (Brown, Tse, & Fortune, 2018, p. 521). Each individual has a "neurological threshold", where those with a low threshold tend to notice and respond to stimuli more readily, and those with a high threshold often miss sensory information, as their neurological system requires stronger stimuli in order to activate (Dunn, 2009). Following acquired brain injury (ABI), individuals may experience a disturbance to sensory processing, with associated alteration to sensory preferences (Brown & Fisher, 2015). Sensory modulation interventions are an emerging area of practice in ABI rehabilitation. Clinician knowledge around methods for exploring individuals' sensory preferences, along with strategies for optimising arousal levels is paramount in maximising participation in rehabilitation and quality of life following ABI.

RESULTS:

See Figure 2 for pre- and post- sensory modulation pathway implementation survey data. Pre-implementation survey data indicated low perceived knowledge (63%) and skills (63%) from the interdisciplinary team in relation to sensory modulation practices. Only 68% of the team identified that delivery of sensory modulation interventions aligned with their role, with only 50% of clinicians reporting having a plan to apply sensory modulation interventions in the coming month. Almost 70% of staff reported perceived benefits of sensory modulation interventions for the ABI population.

Following delivery of targeted education, the post-sensory modulation pathway implementation survey data indicated an increase in staff knowledge of the sensory modulation pathway (100%) and improved skills to apply interventions (84%). More than 95% of staff reported the belief that sensory modulation interventions would benefit patient outcomes. The sensory modulation clinical pathway was reported to be routinely applied within practice by 88% of staff.

AIM:

To describe the process of developing and implementing an evidence-based sensory modulation clinical pathway for patients with ABI.

METHOD:

See Figure 1 for steps taken to develop the Sensory Modulation Clinical Pathway.

Figure 1: Sensory Modulation Clinical Pathway development process

Interdisciplinary Sensory Modulation work group formed

Included: Occupational Therapy, Speech Pathology, Psychology, & Nursing

Literature review completed to inform clinical pathway development

Identification of recommended assessment/screening tools and approaches to intervention

Consultation with clinical experts and researchers

Inform pathway development and associated education strategy

Survey: Pre-implementation of Sensory Modulation pathway

Exploration of interdisciplinary team's perceived knowledge, skills and beliefs in relation to sensory modulation practices. N=22 (Allied Health, Medical & Nursing)

Pre-implementation survey data analysis

Review of results by Sensory Modulation work group

Development of Sensory Modulation champion roles

Interdisciplinary roles created to support implementation and application of the clinical pathway in practice

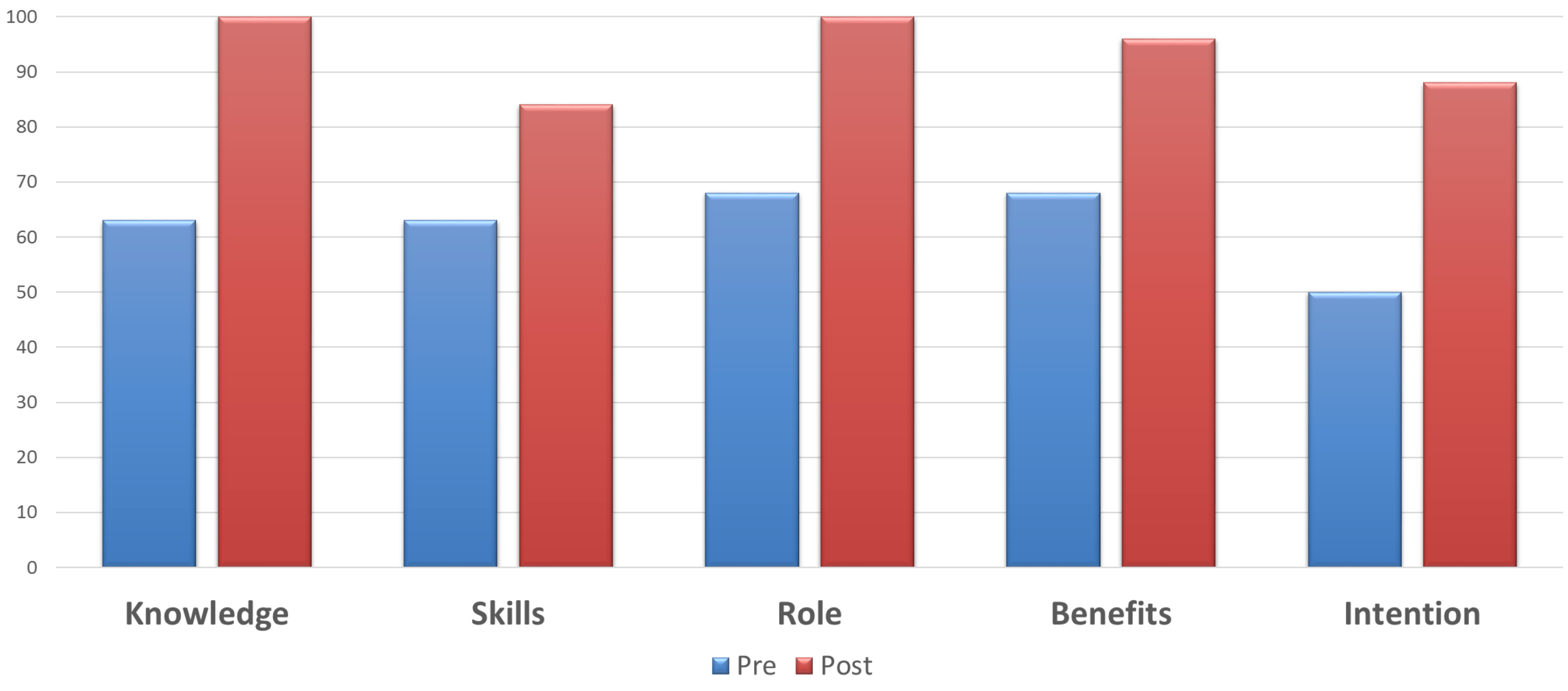
Development & implementation of an education package

Targeted education and training delivered to the interdisciplinary team. Includes training in sensory tools, approaches to intervention and case example discussions

Survey: Post-implementation of Sensory Modulation clinical pathway

Exploration of interdisciplinary team's perceived knowledge, skills and beliefs in relation to sensory modulation practices. N=26 (Allied Health, Medical & Nursing)

Figure 2. Pre- and post- Sensory Modulation pathway implementation survey results



DISCUSSION:

Survey results demonstrated that implementation of a targeted education strategy had an overall positive effect on the team's perception of knowledge and skills in utilising the sensory modulation pathway.

Enablers to implementation of the pathway included a workplace culture of innovation, research and learning; consultation and education with experts throughout the pathway development phase; and assignment of sensory modulation "champions" to provide education and clinical support and promote sustainability of practices. One of the challenges encountered throughout the pathway development process included staff perception of increased workload with an additional clinical pathway. This was addressed through education around embedding interventions as standard practice. The initial time commitment for staff to attend education sessions also presented a challenge, however this was necessary in order to achieve staff engagement and embed the pathway in practice. While there was a considerable initial time commitment for the sensory modulation work group to develop and deliver education, the education package included recorded sessions and written material that could therefore be easily applied for future staff training.

CONCLUSION:

Development of an evidence-based clinical pathway, in combination with a targeted education strategy that is developed through clinician engagement, can facilitate knowledge translation and embed sensory modulation practices in an ABI rehabilitation setting.

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Improving J☺y in Work

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Background

Research conducted at Caulfield and Epworth Hospitals in 2015, identified that some rehabilitation staff experienced burnout, secondary traumatic stress and reduced compassion satisfaction.

In 2017, the Institute of HealthCare Improvement (IHI), published a white paper entitled: 'IHI Framework for Improving Joy in Work'.

Aim

To improve the Alfred Health Community Rehabilitation Programs' staff experience at work through implementation of the IHI's 'Framework for Improving Joy in Work'.

Method

The IHI's 'Framework for Improving Joy in Work' sets out four steps that must be followed for this to be successful. The table below identifies the four steps and the questions and measures we asked staff via Survey Monkey©.

Framework for Improving Joy in Work - 4 Steps:

Step 1. Ask Staff: "What matters to you?"

Our Survey Questions:

- What matters to you at work?
- What do you appreciate at work that makes for a good day?

Step 2. Identify unique impediments to joy in work in the local context.

Our Survey Questions:

- What gets in the way of a good day at work?
- What is the one thing at work that you would change right now?

Step 3. Commit to a systems approach to making joy in work a shared responsibility at all levels of the organization.

Addressed by the organisation via initiatives such as:

- Alfred Health Strategic Plan 2016-2020
- Schwartz Rounds
- Patient & Staff Experience Committee
- Little Things Matter Awards
- Support from Executive staff for projects such as this one

Step 4. Use improvement science to test approaches to improving joy in work in your organization.

Our survey asked staff to complete two measures:

① **Net Promoter Score (NPS)** – a single question:
How likely is it that you would recommend the Alfred Health Community Rehabilitation Program as a place to work to a friend or colleague?

Not at all likely | Extremely Likely

0	1	2	3	4	5	6	7	8	9	10

- The **Net Promoter Score** is an index from -100 to 100 which we used to gauge staff satisfaction with the program by measuring the willingness of staff to recommend the program to others.
- A score above 0 is considered positive, as there is a greater number of staff who recommend the program as a place to work.
- A negative score is considered unfavourable as there is a greater number of staff who don't recommend the program as a place to work.

② **ProQOL** (Professional Quality of Life Measure) - a 30-question measure that looks at Compassion Satisfaction, Burnout and Secondary Traumatic Stress.

Method

Total number of questions was 35 (comprising steps 1, 2 and 4).

Two variations of the survey (the full 35 question survey or the single NPS) were administered 5 times over a 12 month period.

A thematic analysis was conducted on the survey responses which were then used to implement changes to improve staff joy at work.

Date of Survey & Themes	Improvement Initiatives
December 2017 Frustrations with IT	• Log of IT issues addressed by the IT portfolio
Backstabbing/Negative Co-workers	• Discussed in staff meeting
Space Issues	• Changes to room booking system, improved sharing of spaces, identified new areas for staff to have lunch
Stress	• Benestar (employee assistance program) presentation at staff meeting • Treat App presentation at staff meeting • Template developed for supervision which includes wellbeing questions
June 2018 Time pressures and burden of administrative tasks	• Review and changes to caseload management and processes • Establishment of 'Efficiencies Working Group'
Concerns about eTQC and computer access	• Additional computers purchased
Lack of feedback from clients	• 'We Care' (feedback forms) provided to clients with a self-addressed envelope • 'We Care' forms placed in a prominent position in reception

Results

Over 80 - 90% return rate on all surveys.

Net Promoter Score significantly improved over the 12 month period from 17 to 24.

ProQOL showed:

•No survey respondent had high levels of Burnout or Secondary Traumatic Stress across all time periods.

•No survey respondent had low levels of Compassion Satisfaction across all time periods.

Conclusion

The IHI's framework was a useful tool to gain a greater understanding of staff, and to improve joy in work in the Alfred Health Community Rehabilitation Program.

This framework could be considered in other departments to improve staff joy at work.

Strength training to improve walking after stroke: How physiotherapist, patient and workplace factors influence exercise prescription.

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Background and Aims

Muscle weakness is well established as the primary impairment that affects mobility after stroke[1] and stroke clinical practice guidelines recommend strength training to improve this muscle weakness .[2]

Physiotherapists commonly include strength training in the rehabilitation of stroke patients[3] however exercise prescription is seldom in line with the recommendations made by the American College of Sports Medicine (ACSM).[4]

The aim of this study was to explore what influences physiotherapists when implementing strength training programs in people with mobility deficits after stroke, to facilitate the application of more effective strength training programs.

Methods

Participants were a convenience sample of physiotherapists providing rehabilitation services to patients following stroke.

The study was conducted via 1:1 interviews delivered through a set of semi-structured, open-ended interview questions (Table 1). Recruitment ceased once thematic saturation was reached.

Themes were mapped to the Theoretical Domains Framework,[5] which identifies barriers and facilitators to implementation of evidence-based care.

Table 1: Semi-structured interview questions on strength training to address mobility deficits after stroke

Q1.	When addressing walking goals with your patients, what are the impairments you most commonly treat and why?
Q2.	When specifically addressing strength to achieve walking goals, which muscle groups do you usually target and why?
Q3.	What research to address muscle weakness after stroke, if any, has the most influence on the way in which you deliver strength training to improve your patients' mobility?
Q4.	Strength training can be delivered in a number of different ways. How do you implement strength training in your practice?
Q5.	Where did you gain your knowledge of strength training and how to implement it with your stroke patients?
Q6.	What types of strength training exercises do you implement when working with your stroke patients?
Q7.	What methods do you use to ensure you are providing effective strength training to your stroke patients?
Q8.	How confident do you feel providing strength training to your stroke patients and why?
Q9.	What further training do you think would be beneficial to help to you improve the delivery of effective strength training?
Q10.	What do you believe influences the delivery of effective strength training in stroke?
Q11.	What patient-related factors impact upon your choice of strength training interventions?
Q12.	What workplace-related factors impact on the way in which you deliver strength training?
Q13.	Do you have any further comments you wish to make?

Results

16 physiotherapists (12 females) with 3 months – 42 years of experience working in stroke rehabilitation were interviewed. Fifteen out of the sixteen participants worked in major metropolitan hospital services. Participants were from Victoria (n=5), Queensland (n=3), New South Wales (n=2), South Australia (n=3), Western Australia (n=2), Tasmania (n=1) and the Northern Territory (n=1).

Four major themes, and 10 sub-themes were identified (Table 2).

Table 2: Major themes and subthemes

1.	Patient characteristics influence the approach to strength training
	1.1 Therapy programs are devised to maximize patient engagement
	1.2 Level of physical and cognitive impairment directs therapy selection
2.	Interpretation of strength training principles varies widely
	2.1 Movement quality is a focus after stroke
	2.2 Lack of clarity regarding strength training principles
	2.3 Therapists prioritize other interventions to improve muscle function
	2.4 Engagement in research influences the delivery of evidence-based practice
3.	Therapist confidence and preference influences the delivery of strength training programs
	3.1 Presence of co-morbidities influenced therapist confidence in the prescription, monitoring and progression of strength training programs
	3.2 Personal preferences determine choice of approach
4.	Workplace context affects the treatment delivered
	4.1 Limitations in resources restricts the implementation of effective strength training
	4.2 Clinical preference of colleagues influences practice

Discussion and Conclusion

The evidence-base for physiotherapy in stroke rehabilitation continues to expand, however there is delay in implementation of of research findings into clinical practice. Using the Theoretical Domains Framework,[5] the key domains for behavioural change that were identified in the themes and sub-themes of the interview responses were: knowledge, skills, behavioural regulation (breaking habits), environmental context and resources.

Implementation science has demonstrated that multi-modal active strategies such as interactive educational sessions, as well as opinion leaders/ champions within organizations, outreach visits and problem-based learning are more effective at improving evidence-based knowledge and practice behaviours than passive strategies (e.g. dissemination of guidelines via email).[6]

Organizations should therefore foster 'champions' in evidence-based stroke practices to drive cultural change within the workplace and create programs to improve staff knowledge, skills and confidence in order to maximize the effectiveness of evidence-based strength training programs after stroke.

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Pilot Consumer-testing of a Novel and Affordable Smart Prosthetic Hand

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BACKGROUND

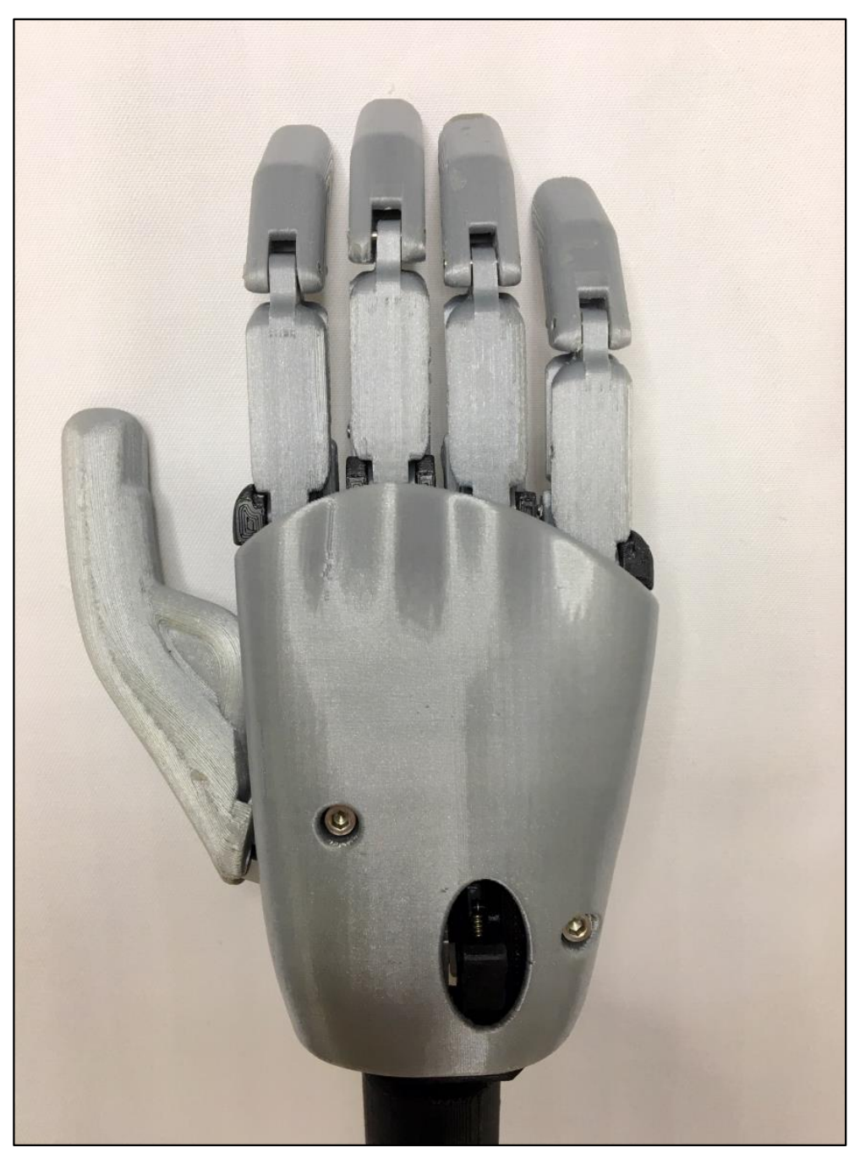
3D printing in the upper limb prosthetic industry is becoming increasingly accessible and affordable. While attracting positive media attention, functional outcomes of these prosthetic devices rarely meet consumer expectations. Combining 3D printing and a steel fabricated mechanisms the "Self Grasping Hand" (Delft University of Technology) seeks to improve upon grip strength and natural movement patterns of existing open-source 3D printed hand designs. The 3D printing technology has the potential to provide infinitely customisable and affordable prosthetics, attracting positive media attention world-wide.

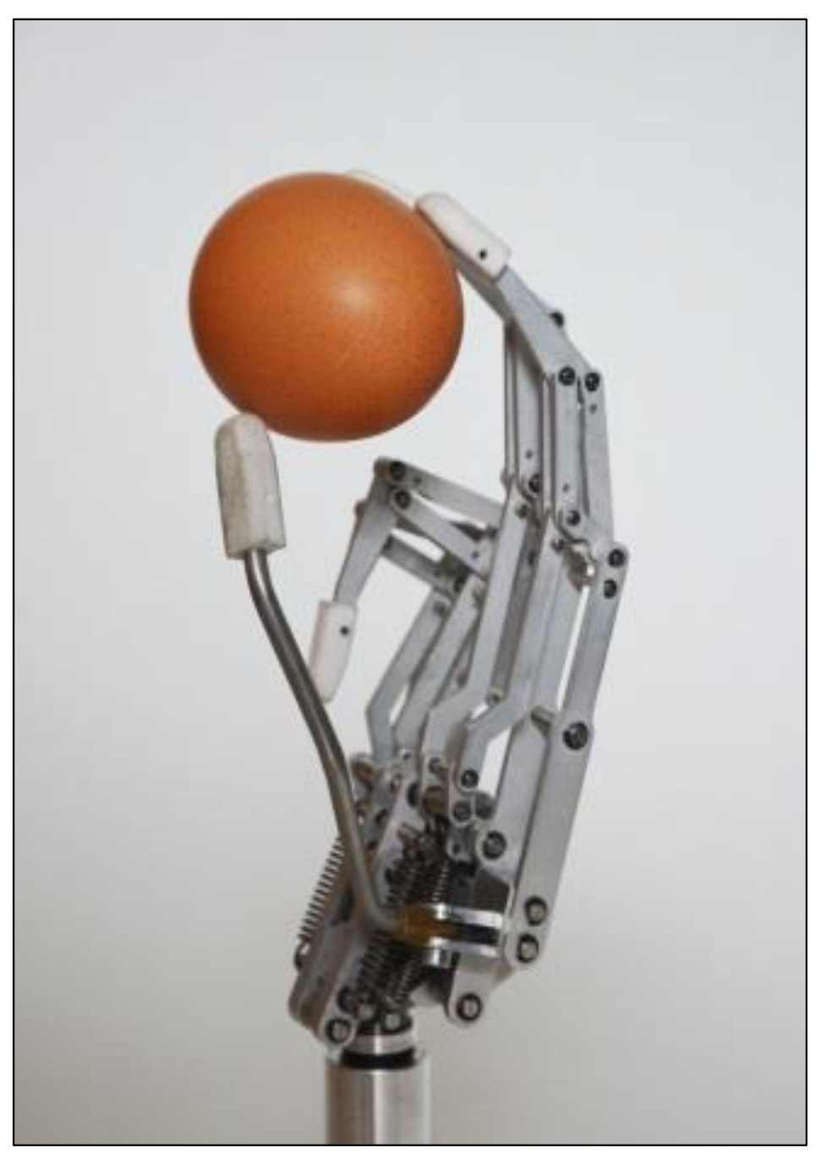
A radically different passive adjustable hand has been designed and patented by Dr Gerwin Smit, Biomedical Engineer at Delft University of Technology, Netherlands. It is lightweight (less than 300g), has a smart 'auto grasp' mechanism that can hold a broad range of objects, and does not require batteries or a shoulder harness. The hand has a skeleton of laser-cut steel components and is encased in a 3D-printed shell. It can also fit inside a silicone glove so that it looks like a real hand.

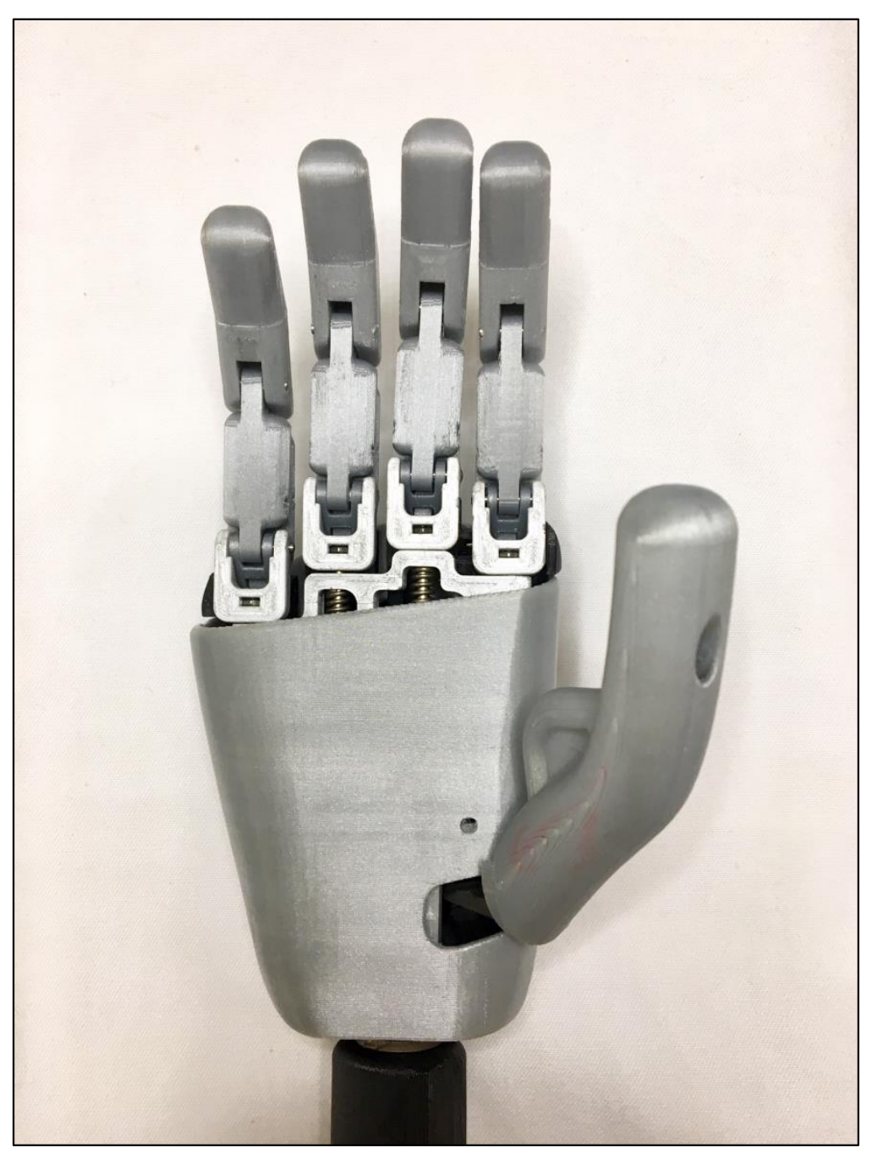
Associate Professor Lisa O'Brien, an Occupational Therapy researcher at Monash University who specialises in hands, met with Dr Smit as part of a Churchill Fellowship to explore the best designs for 3D printed hands. She is now working with Dr Smit's team to pilot test the new hand in Melbourne in early 2019 with assistance of the Caulfield Hospital Prosthetics Department.

AIM

To pilot test the Self Grasping Hand with ten adult prosthesis users with trans-radial limb difference. Specifically, with the aim to measure device daily usage time and collect consumer feedback to inform future models.







METHOD

Ten adult participants who are established body-powered-prosthetic users were recruited for the pilot study. The participants are fitted with the Self Grasping Hand for use over a two-week period. Patterns of wear and total time in use are recorded via upper limb activity monitors.

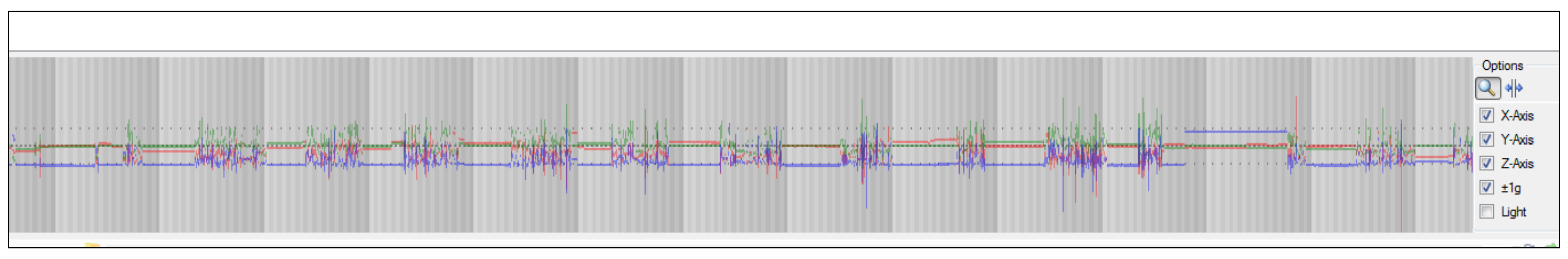
Participants were fitted with the device by a Prosthetist and Biomedical Engineer. They then underwent training with an occupational therapist on how to utilise the device during different tasks.

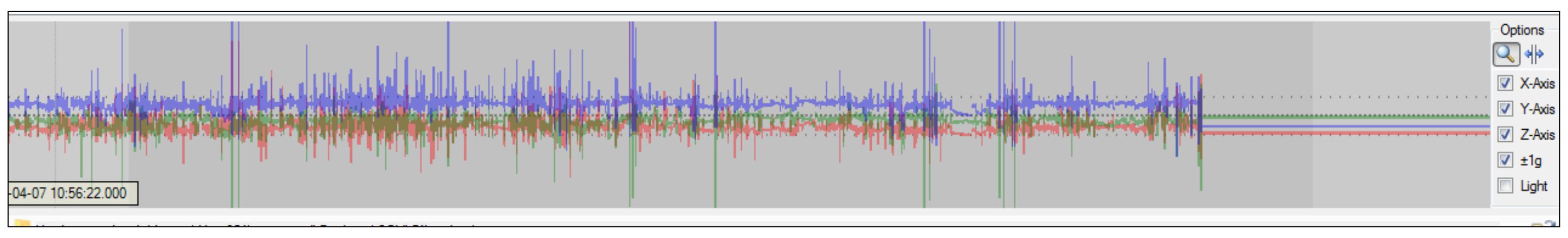
Participants were then asked to use the device as much as possible over two weeks then return to provide feedback. Patterns of wear and total use time were recorded via upper limb activity monitors. Activity monitors are fitted to both the prosthetic side and contralateral wrist. Where required, a third activity monitor is fitted to the participants' alternative (already existing) terminal device which can be used in place of the Self Grasping Hand when desired. All movement is recorded during the two-week period.

At the end of the trial period the participants' satisfaction, function and prosthesis-related quality of life were also measured. The industry standard outcome measures of the Orthotics and Prosthetics Users' Survey and the Trinity Amputations and Prosthesis Experience Scale provide a formal collection of specific feedback and score of overall satisfaction with the Self Grasping Hand.

DATA

Example of raw data collected from participants activity tracker. This data will be analysed to determine how and when the Self Grasping Hand was actually utilised during the trial period.





RESULTS

The Self Grasping Hand performed very well on laboratory testing in terms of strength and robustness of the grasp mechanism. The pilot study is currently underway in Melbourne, Australia with definitive results yet to be obtained.

The data recorded from the activity monitors will be analysed by an upper limb movement specialist who will interpret the movement patterns obtained. This information coupled with the direct feedback from the participants and outcome measures will provide further insight to improving the Self Grasping Hand design.

CONCLUSIONS

The results of this pilot study will inform the methodology for larger-scale international consumer test of the hand. Data from the study will be utilised to refine the design and assist in future developments of passive adjustable hand devices.

ACKNOWLEDGEMENTS

This study is funded by The Promobilia Foundation (Sweden)

Global Mapping for the Epidemiology of Paediatric Spinal Cord Damage: Towards a Living Data Repository

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Introduction

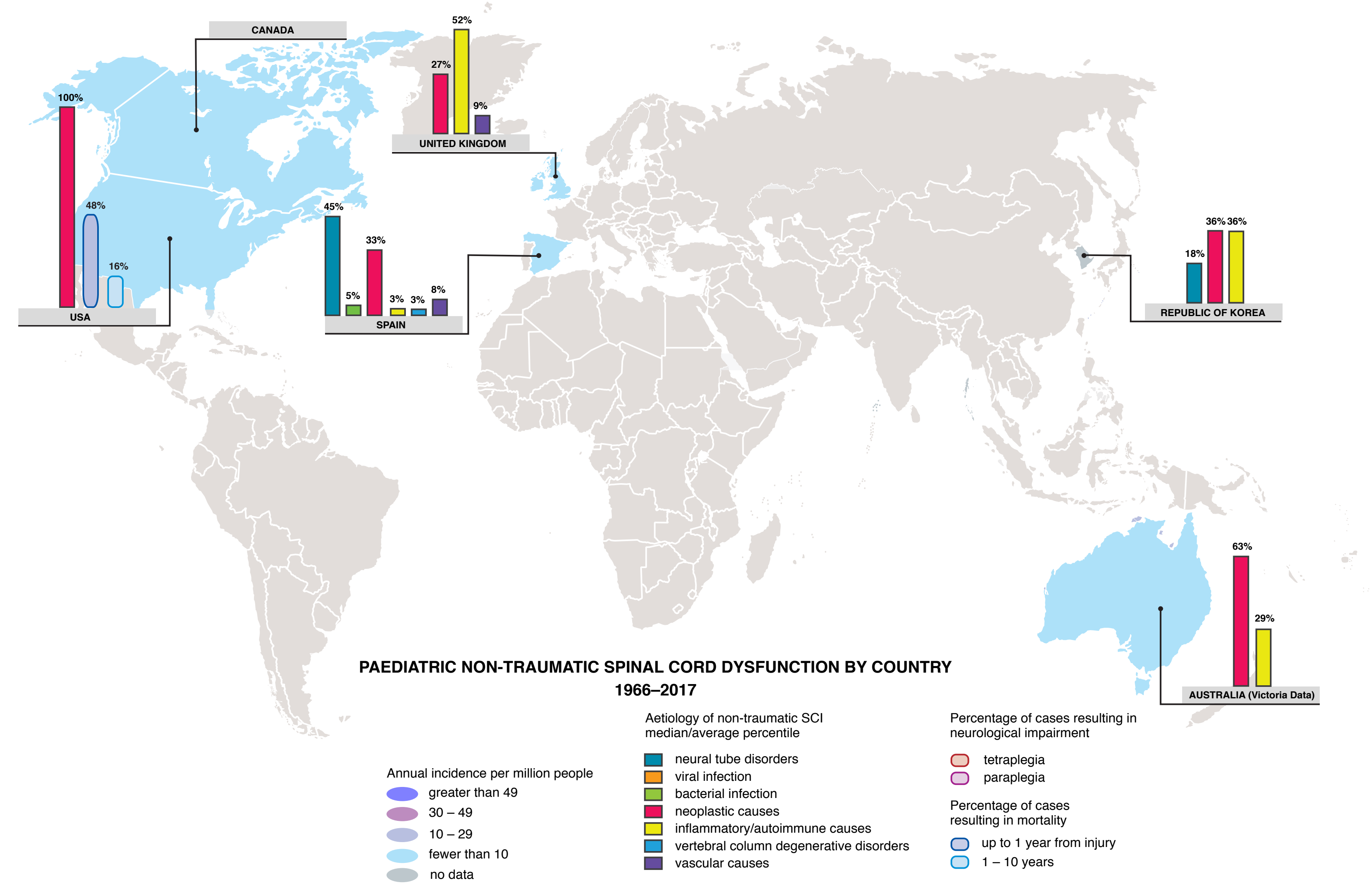
Compared with adults, there is very little epidemiological information available about paediatric spinal cord damage. The aim of this project is to report the results of a comprehensive literature search and compile global maps summarising the epidemiology of paediatric spinal cord damage, focusing on incidence, prevalence, aetiology, and survival. The results for traumatic spinal cord injury (SCI) and non-traumatic spinal cord dysfunction (SCDys) will be reported separately.

Methods

Literature search of Medline (1946 – March 2017) and Embase (1974 – March 2017). Relevant articles in any language regarding children with spinal cord damage included. Stratification of data quality into Green/Yellow/Red 'zones' facilitated comparison between countries.

Results

862 abstracts were reviewed and data from 23 articles were included from 13 countries in 6 of the 21 Global Regions. Thirteen studies involved paediatric traumatic spinal cord injury (SCI) and seven were regarding non-traumatic spinal cord dysfunction (SCDys). An additional three articles provided both paediatric SCI and SCDys data. The median SCI incidence rates in Global Regions were: Asia, East 5.4/million population/year; Australasia 9.9/million population/year; Western Europe 4.1/million population/year and North America, High Income 13.2 million population/year. The median SCDys incidence rates in Global Regions were: Australasia 6.5/million population/year; Western Europe 7.5/million population/year and North America, High Income 2.1/million population/year. SCI was mostly due to land transport (46% – 74%), falls (12% – 35%) and sport/recreation (10% – 25%) and SCDys was mostly caused by tumours (30% – 63%) and inflammatory/autoimmune causes (28% – 35%).



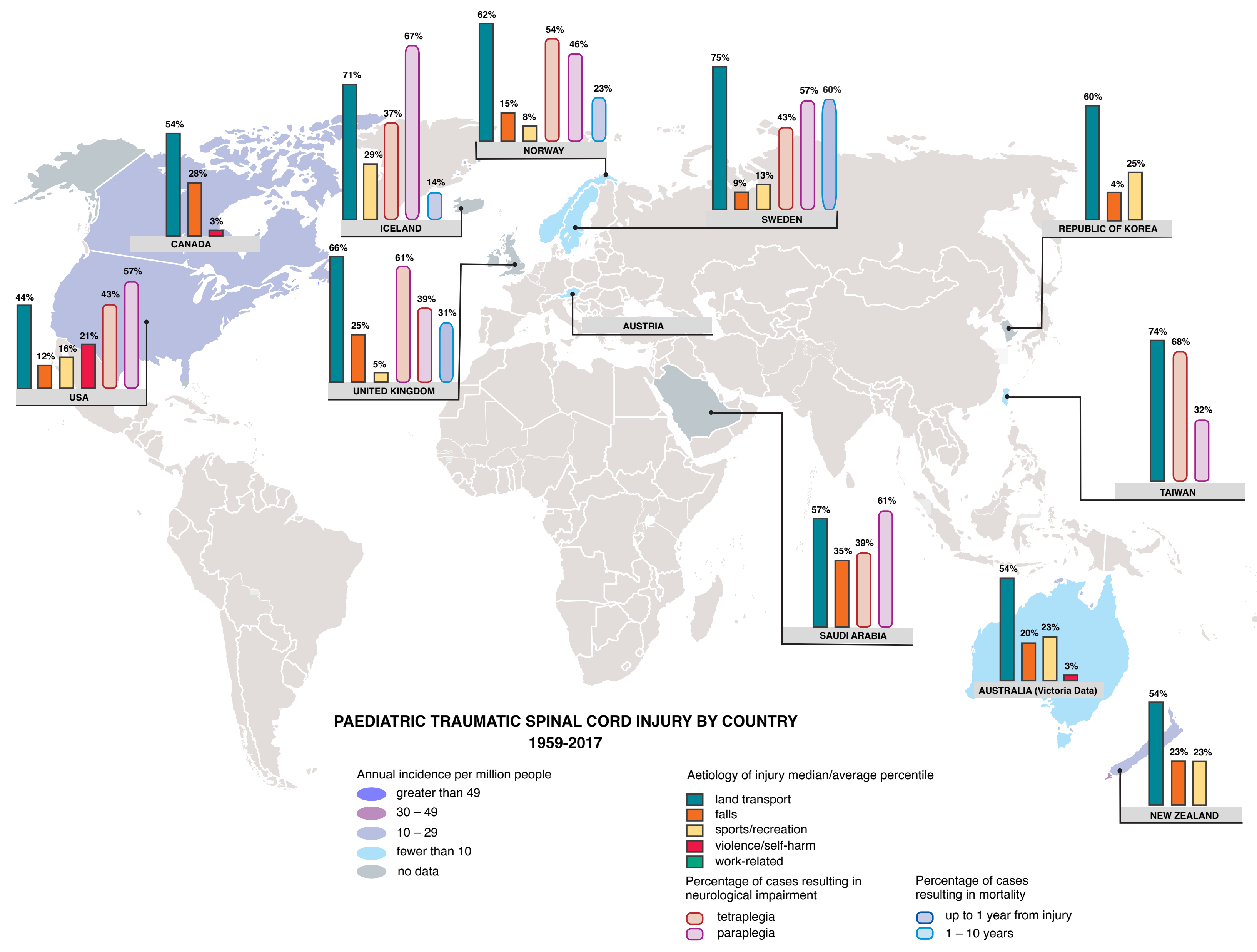
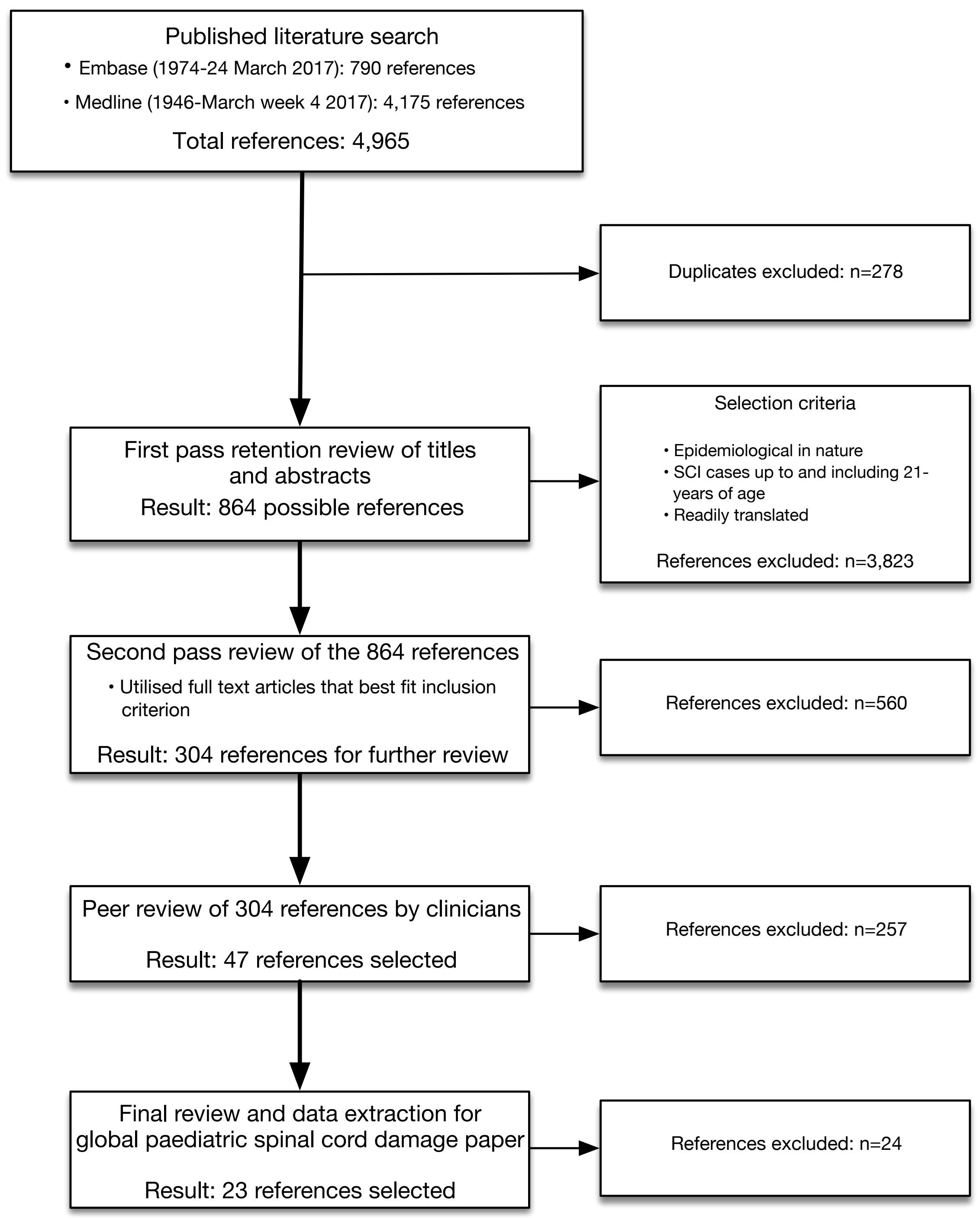


Figure 1: Flow chart of the search methodology and overview of the results



Published literature search
- Embase (1974-24 March 2017): 790 references
- Medline (1946-March week 4 2017): 4,175 references

Total references: 4,965

Duplicates excluded: n=278

First pass retention review of titles and abstracts
Result: 864 possible references

Selection criteria
- Epidemiological in nature
- SCI cases up to and including 21-years of age
- Readily translated

References excluded: n=3,823

Second pass review of the 864 references
- Utilised full text articles that best fit inclusion criterion

Result: 304 references for further review

References excluded: n=560

Peer review of 304 references by clinicians

Result: 47 references selected

References excluded: n=257

Final review and data extraction for global paediatric spinal cord damage paper

Result: 23 references selected

References excluded: n=24

Acknowledgements

The members of the ISCoS Prevention Committee and the ISCoS membership for their continuing enthusiasm. Dr Lee was funded by the Prince of Wales Hospital Training, Education and Study Leave (TESL) fund (New South Wales Department of Health, Australia). We would like to thank Erin Gardner and Izzy Chapman for their assistance with the initial work on the literature search, and Christiani Tjandra, Alysia Wong and Paul Peng for their help in retrieving source articles. Dr Vanessa Noonan and Ms Jane Galvin are thanked for providing additional clarifying information that enabled us to utilize their manuscripts in this project.

Caulfield
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A Systems Thinking Approach to physical activity in older adults: a community perspective.

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Population Health Team, Caulfield Community Health Service (CCHS), Alfred Health

Background

Physical activity rates are consistently low across the Caulfield Community Health Service's (CCHS) catchment - particularly among older adults.

- One third of City of Glen Eira residents aged over 65 years do not meet the recommended Australian guidelines for physical activity^1.
- 30.4% of City of Glen Eira residents spend more than eight hours a day sitting^2.
- 30.8% of City of Stonnington residents spend more than eight hours a day sitting^3.

Physical activity is linked to health and wellbeing outcomes, and increasing physical activity in older adults could help improve overall health and wellbeing and reduce the risk of chronic conditions^4. Consequently as physical inactivity is a complex problem without one single straightforward solution, the Health Promotion Team utilised a systems thinking approach to explore and understand the problem in depth.

Aim

To explore enablers and barriers to older adults' physical activity participation within the community.

Methods

CCHS's Health Promotion Team utilised a systems thinking tool (group model building) to facilitate a participatory approach to understand the complex problem of physical inactivity.

Group model building involved facilitated sessions with the community to explore:
Who are the older adults in our community?
What is physical activity for our older adults?
What physical activity do they currently engage in?
Where do our older adults live, work and play?

Participants were also guided to explore and discuss the enablers and barriers to physical activity across 3 domains:

- Individual
- Local community
- Society

Enablers and barriers to physical activity were then grouped into themes and participants were guided to draw connections and explore the causes between enablers and barriers. At the conclusion of the sessions, participants were encouraged to identify local stakeholders who they believed could help to shape solutions to the issue of physical inactivity in the local community.

Figure 1. Community members constructing the systems map of enablers and barriers to physical activity (hard copy).

Results

- 3 group model building sessions facilitated by CCHS staff
- 15 community members (older adults) attended

Identified enablers:	Identified barriers:
Confidence	Discrimination
Positive values and beliefs	Knowledge
Adult-friendly physical activity options	Motivation
Knowledge about the benefits of physical activity	Transport
Access (including transport)	Environment
	Attitudes

Community stakeholders identified by community members included General Practitioners, local councils, peak physical activity bodies and cultural service providers. Participants explored the relationship between the enablers and barriers through the creation of a systems map. The map was then transcribed by staff onto a computer software program (Kumu) (see Figures 1-3).

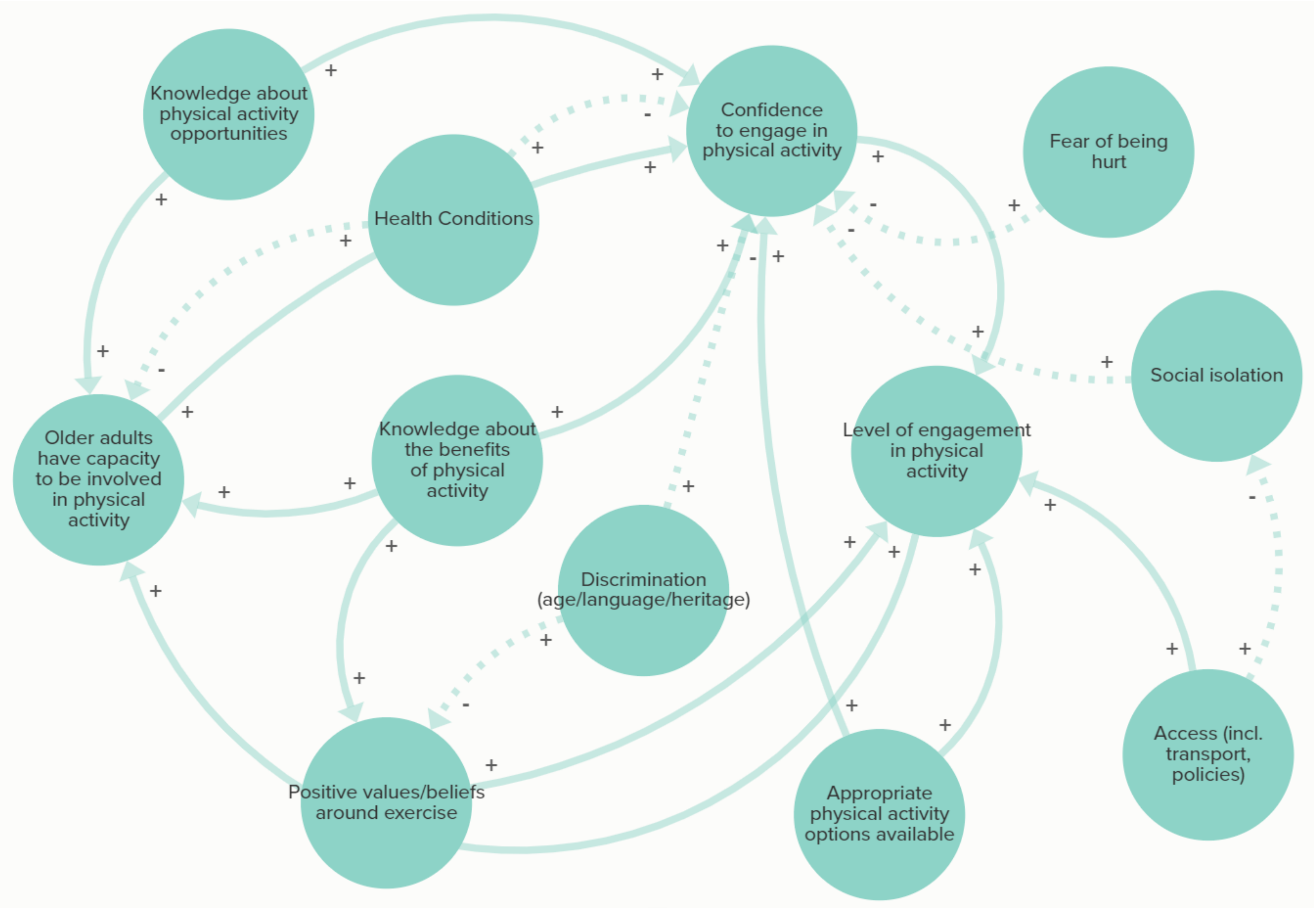

Figure 2. Core systems map after being transferred to an online mapping program.

Discussion

Adopting a systems thinking approach to understand the issue of physical inactivity highlighted the importance of involving community members as experts. The process also highlighted assumptions and unconscious biases staff may possess. The group model building sessions also reinforced that improving physical activity is a complex problem and requires the collective involvement of many actors and community ownership.

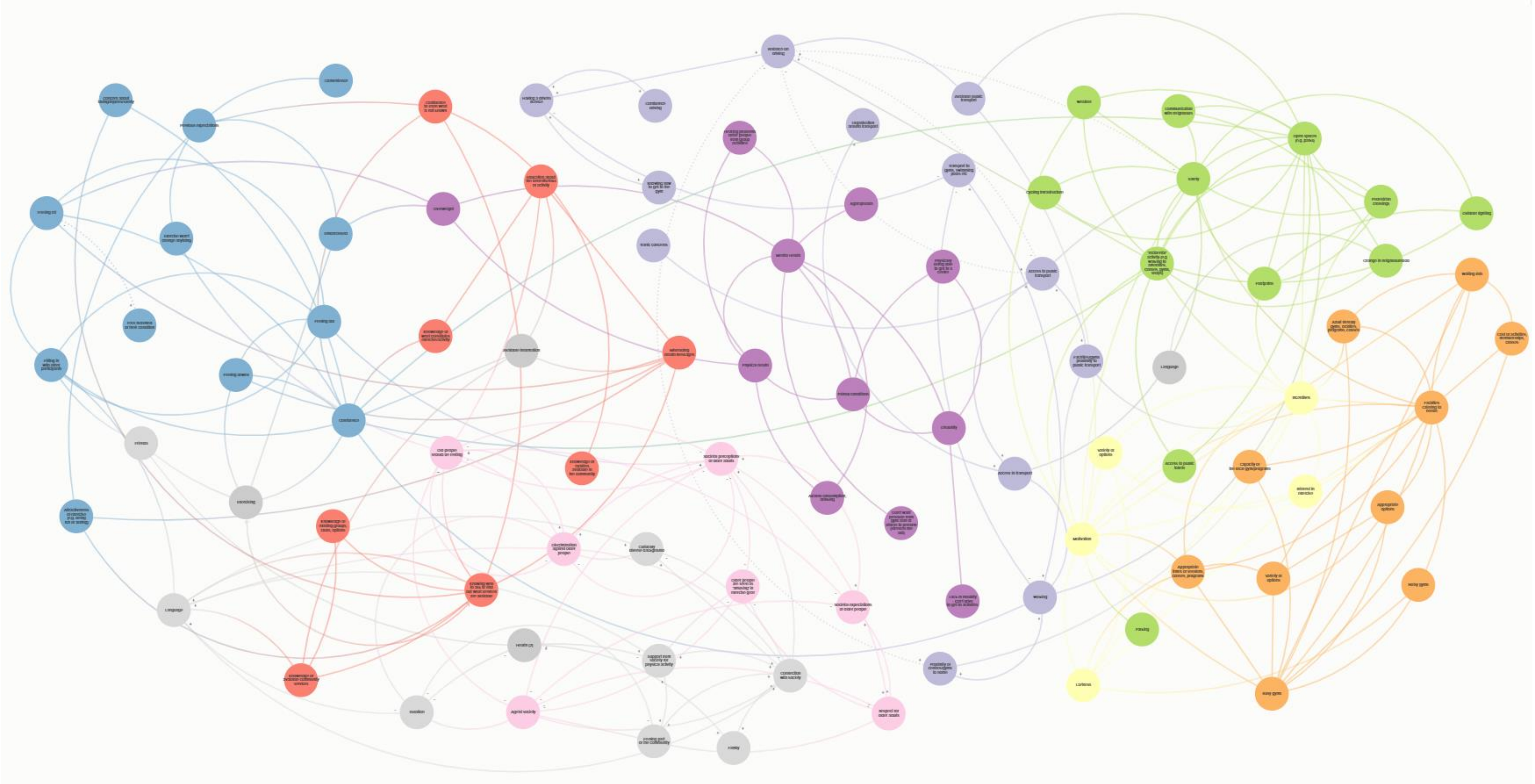

Figure 3. Larger systems map of enablers and barriers to physical activity.

Conclusions

Using a systems thinking approach increased the understanding of physical inactivity in older adults particularly when exploring the relationship between the enablers and barriers and the development of a systems map. Data and maps obtained from the project will shape and design future activities and programs to enhance enablers and address the identified barriers to physical activity. Stakeholders identified by participants were invited to further group model building sessions to collectively identify ways to influence change.

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Early intervention for social skills impairment following acquired brain injury: Promoting self-awareness to optimise community integration

theAlfred

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BACKGROUND AND OBJECTIVES:

Impaired social skills are a common consequence following acquired brain injury (ABI), and can contribute to challenges with both maintaining and forming relationships, often resulting in lowered mood and social isolation. The impact of social skills impairment is often not realised by the individual with ABI, or their significant others, until difficulties are encountered with community integration after leaving hospital.

Best practice recommendations for treatment of impaired social skills following ABI suggest that specific training should be applied, with promising outcomes demonstrated with group-based programs (Haskins, 2012). While there are some established protocols for social skills group interventions for community-dwelling patients with ABI (McDonald et al., 2008; Hawley & Newman, 2012), the benefits of early intervention to target social skills impairments for patients with ABI in an inpatient setting remains largely unknown.

The objectives of this study included:

1/ to implement an evidence-based interdisciplinary Social Skills Group Program (SSGP) in an ABI inpatient rehabilitation setting; 2/ to evaluate patient outcomes associated with the SSGP

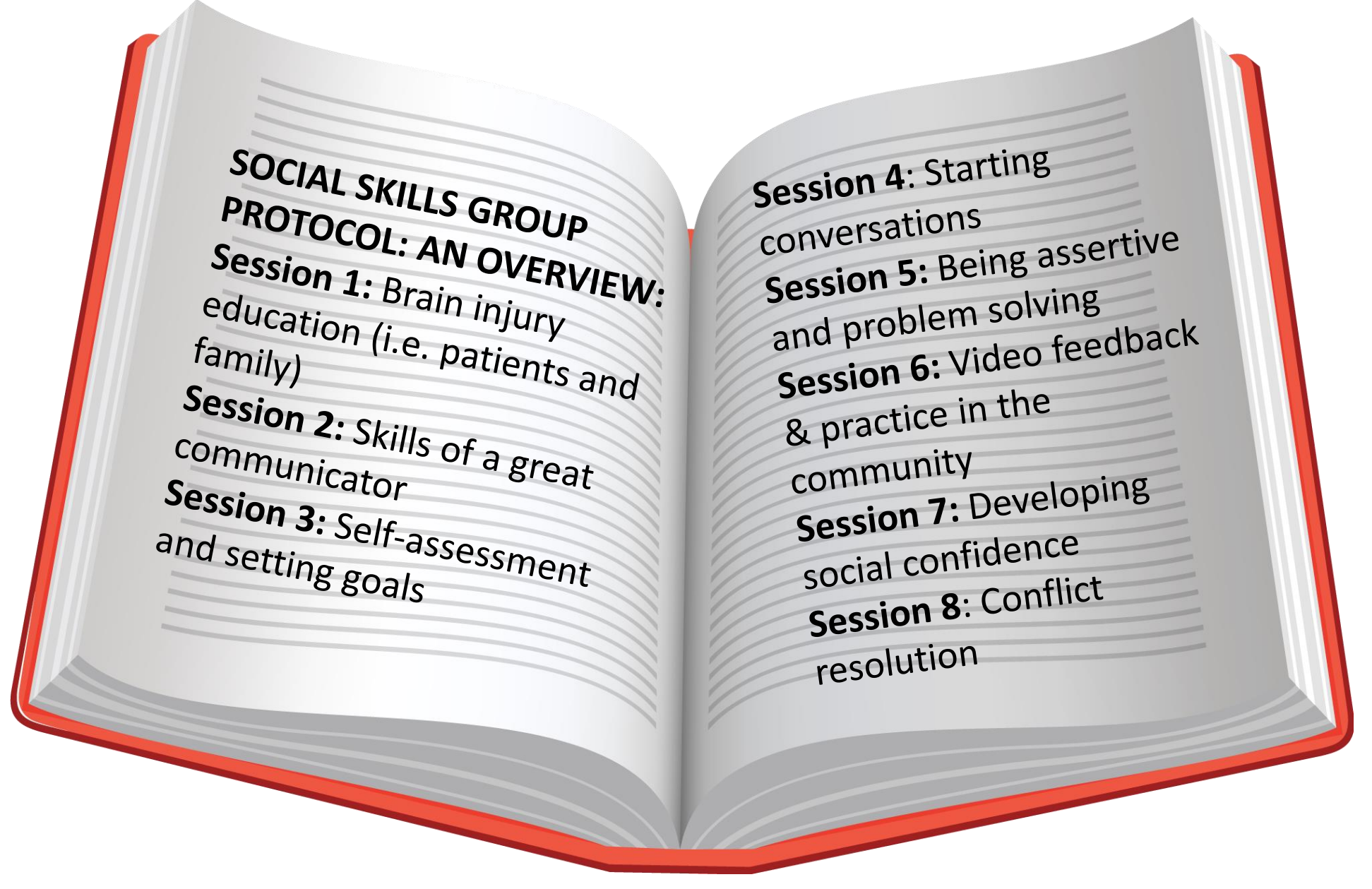
METHODS

An inpatient SSGP protocol was developed, informed by 2 existing protocols. A pre- and post- design was used, with outcome measures including the Self-awareness of Deficits Interview (SADI), La Trobe Communication Questionnaire (LTQ), and the Hospital Anxiety and Depression Scale (HADS). Knowledge of goals was also recorded. Seven inpatients from an ABI Unit were recruited to the program. Data were analysed using descriptive statistics and coding techniques.

RESULTS:

See Figure 1 for overview of the 8-week Social Skills Group Program Protocol. **See Table 1** for participant demographic information.

Figure 1: Social Skills Group Protocol



SOCIAL SKILLS GROUP PROTOCOL: AN OVERVIEW:

Session 1: Brain injury education (i.e. patients and family)

Session 2: Skills of a great communicator

Session 3: Self-assessment and setting goals

Session 4: Starting conversations

Session 5: Being assertive and problem solving

Session 6: Video feedback & practice in the community

Session 7: Developing social confidence

Session 8: Conflict resolution

Table 1. Participant demographic information

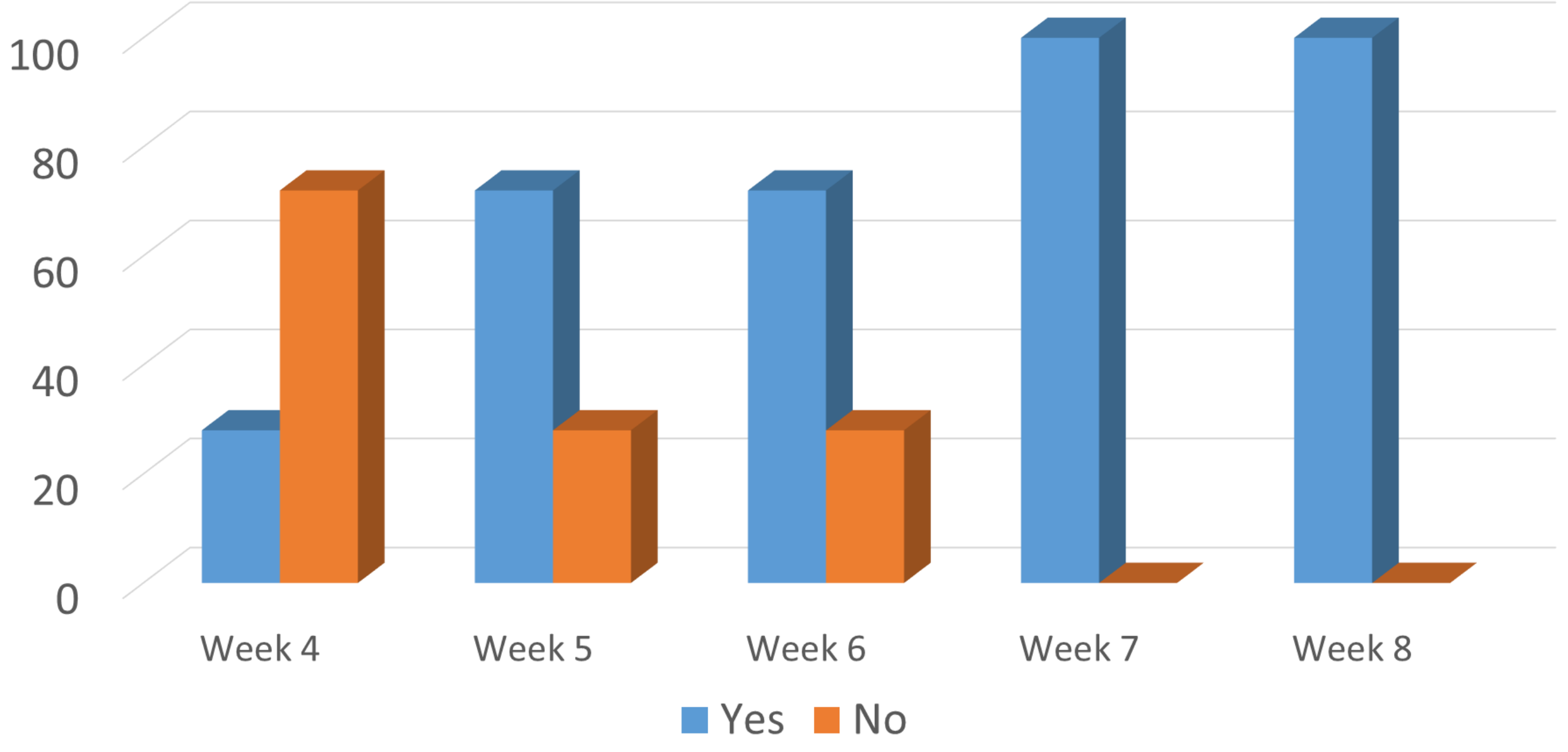
Participants	n=7
Gender:	
- **Male**	6
- **Female**	1
Age:	
- **Mean (SD)**	37.1(11.06)
- **Range**	22-51
Diagnosis:	
- **Stroke**	2
- **Traumatic brain injury**	4
- **Hypoxic brain injury**	1
Time post onset of ABI (days):	
- **Mean (SD)**	148.5(25.5)
- **Range**	123-192

Outcomes:

Knowledge of goals:

Week 3 of the SSGP involved setting goals, with participant knowledge of goals measured from week 4 onwards. **Figure 2** outlines participants' ability to recall goals across the remainder of the SSGP. Knowledge of social skills goals improved from 28% in week 4 to 100% in week 8.

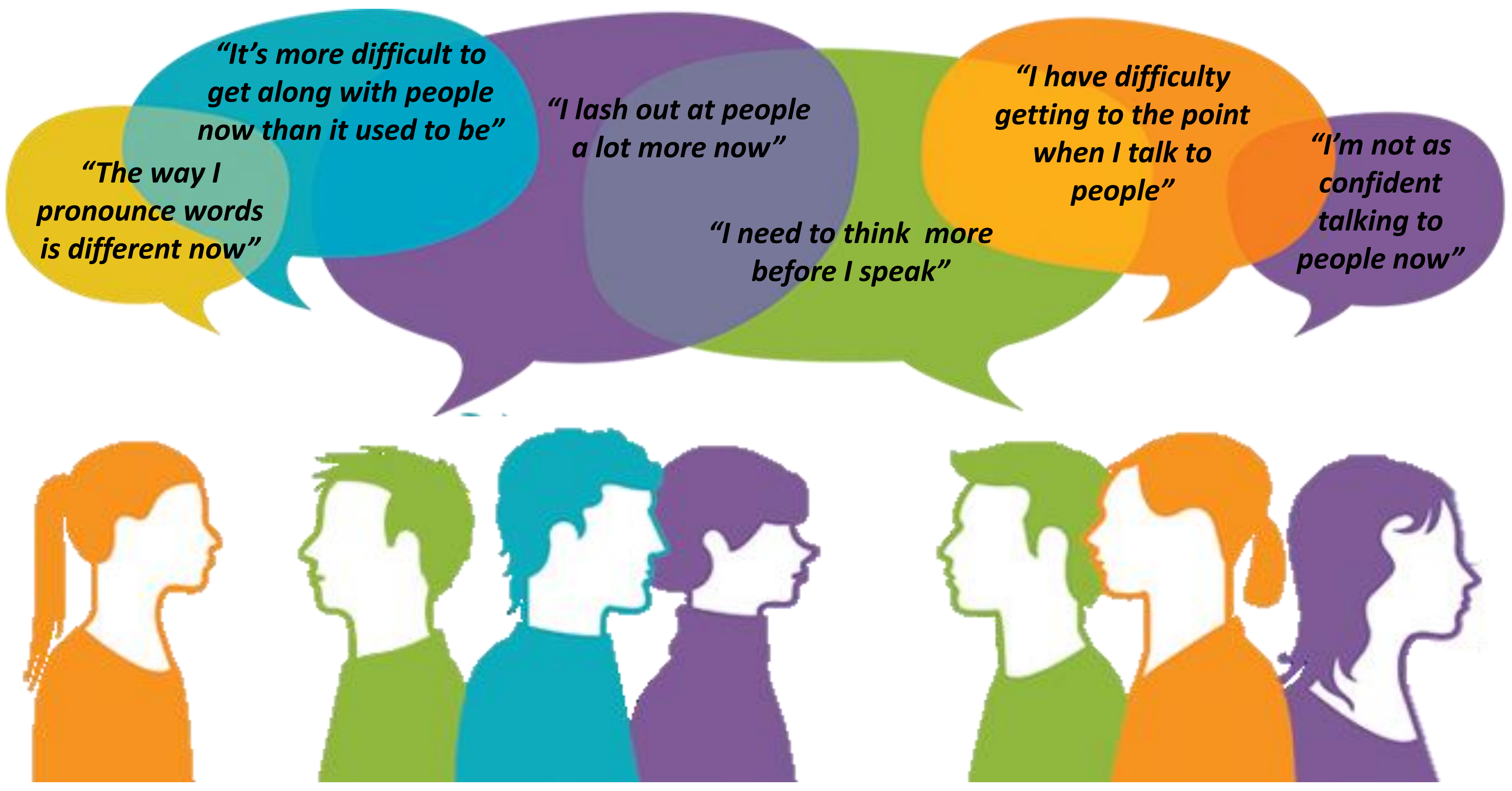
Figure 2. Participants' ability to recall social skills goals



Awareness of social skills deficits:

Self-report of social skills impairments obtained from SADI increased from 43% (pre-intervention) to 57% (post-intervention). The number of social skills impairments identified by participants increased from 4 (pre-intervention) to 8 (post-intervention), with a broader range of social skills impairments identified post-intervention. **See Figure 3** for some of the social skills impairments identified by participants through the SADI. Whilst 86% (n=6) of participants stated future goals around returning to work, anticipated barriers towards achieving this goal were reported to be related to physical impairments, with 0% of participants reporting that social skills impairments would present as a potential barrier into the future. LTQ scores remained stable over time.

Figure 3. Participants' identified social skills impairments



Anxiety & Depression: HADS scores remained stable over time, with nil change noted following participation in the SSGP.

CONCLUSION:

Early intervention in the subacute phase of recovery following ABI is important to achieve greater awareness of social skills impairments and successful community integration. It is possible for an early social skills intervention applied in the inpatient rehabilitation setting to achieve improved awareness of social skills impairments, so that these goals can be worked towards further in the community context. Inclusion of outcome measures that are sensitive in detecting change in awareness of social skills impairments is an important consideration. Modification of the SSGP protocol to include greater repetition and revision of social skills goals across each session contributed to improved knowledge of short-term goals across the duration of the group. It is important for clinicians to be aware of patients' challenges with recall or acknowledgement of goals in the social skills domain. Reinforcement of social skills goals is key to building awareness of impairments to achieve best long-term outcomes.

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Adult stroke survivors with upper limb spasticity set goals focused on activity limitations and participation restrictions

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Introduction

Patient-centred goal setting is an important component of spasticity management, and the goals set can provide insights into what matters most to people with chronic spasticity after stroke.

Aim

To describe the patient-centred goals related to the upper limb of stroke survivors with spasticity.

Method

Semi-structured goal-setting interviews were completed with participants who had participated in a clinical trial designed to address upper limb spasticity after stroke. Goal setting was facilitated by experienced occupational therapists and physiotherapists as part of the baseline assessment. Goals were then independently coded using the International Classification of Functioning, Disability and Health (ICF) by two raters using established linkage rules.

Results

Participants: The n=134 adult stroke participants who were living in the community set n=402 goals. Most participants were male (70%) and they were a mean of 5 years (SD 7) post-stroke; approximately half (55%) had previously received botulinum toxin injection/s (Table 1).

Age in years, *mean* (*SD*)	61 (16)
Sex, *n male (%)*	94 (70)
Education, *n university (%)*	33 (25)
Cognition (SPMSQ out of 10), *mean (SD)*	9 (1.2)
Time post-stroke in years, *mean* (*SD*)	5 (7)
Baseline Tardieu, median (IQR)	2 (0)
Previous BoNT-A injection, *n yes (%)*	74 (55)
Able to move ≥1 block on BBT, *n yes (%)*	31 (23)

Table 1. *Participant characteristics (n=134)*

Goals: Despite attending a clinic specifically aimed at reducing spasticity (an impairment), only n=98 goals (24%) mapped to the Body Structure and Function Domains of the ICF (Figure 2).

98 goals (24.4%) mapped to **Body Structure and Function** Domains

"To increase **passive range of motion** in the fingers"

217 goals (54.0%) mapped to **Activities and Participation** Domain

"To be able to **eat food** with a knife and fork"

87 goals (21.6%) mapped to **both**

"To reduce the **amount of pain** experienced when **cutting the fingernails**"

Figure 2. *Upper limb spasticity goals mapped to the ICF (n=402)*

Of the goals that mapped to the Body Structure and Function Domains of the ICF, most (25%) were set to gain control of simple voluntary movement of the hand/arm (e.g. lift arm, open hand). Of the goals that mapped to the Activities and Participation Domains of the ICF, most were set to either gain fine hand and arm use or self care (Table 2).

ICF Code	Goal category	Frequency (%)
d440 – fine hand use	Pick up, grasp/release and manipulate objects	30
d445 – hand and arm use	stabilising objects, reaching, pulling/pushing, throwing	13
d510 – washing oneself	Wash/dry hands, body, face	11

Table 2.*The proportion of goals set to mobility and self care codes of the Activities and Participation Domain of the ICF*

Factors that might influence goal setting: Participants who were naive to botulinum toxin injection were more likely (62%) to set goals which addressed activity and participation than those who had a history of previous botulinum toxin injection (47%).

Participants who had some active movement were more likely (67%) to set goals which mapped to Activity and Participation Domains of the ICF than those without any grasp or release ability (50%).

Key Points

- Stroke survivors with spasticity were able to articulate a wide range of upper limb goals.
- Past experience with botulinum toxin injection, and baseline level of active motor function may be factors that may influence the type of goals set.
- Health professions can balance realism with optimism to set achievable goals while maintaining hope and motivation for improvement.

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Caulfield HOSPITAL

VALIDATION OF A CLINICAL PREDICTION RULE FOR AMBULATION OUTCOME FOLLOWING NON-TRAUMATIC SPINAL CORD INJURY

Sturt, R[1]. Hill, B[1]. Holland, A[1,2]. New, P[3,4,5]. Bevans, C[1].

INTRODUCTION

- Non-traumatic spinal cord injury (NTSCI) is damage to the spinal cord associated with causes other than trauma.
- People who have a SCI prioritise return to walking as a key outcome. Predicting the ability to walk is of utmost importance in a clinical setting .
- In 2011 van Middendorp et al developed a clinical prediction rule (CPR) for traumatic spinal cord injury.
- The present study is the first time this rule has been validated for NTSCI.

Aim:
To validate a Clinical Prediction Rule for ambulation in a NTSCI population

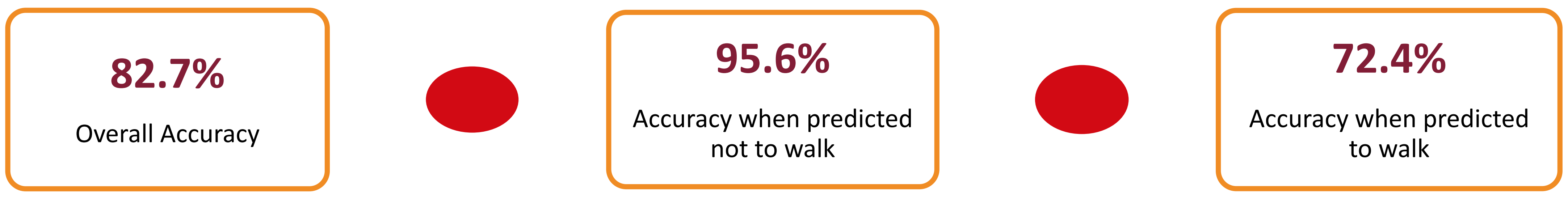
METHODS

- Prospective cohort study
- Recruitment April 2013- July 2017.
- Data based on original CPR were collected from medical records and by interview.
- SCIM item 12 was used to quantify ability to walk at 6 and 12 months.
- A receiver operating curve (ROC) was plotted to assess the area under the curve (AUC) to determine the performance of this CPR.


Age + Motor Score of Quadriceps + Motor Score of Gastrocsoleus + Light Touch Sensory Scores L3 and S1 = Clinical Prediction Score

Figure 1: Data collected to calculate clinical prediction rule.

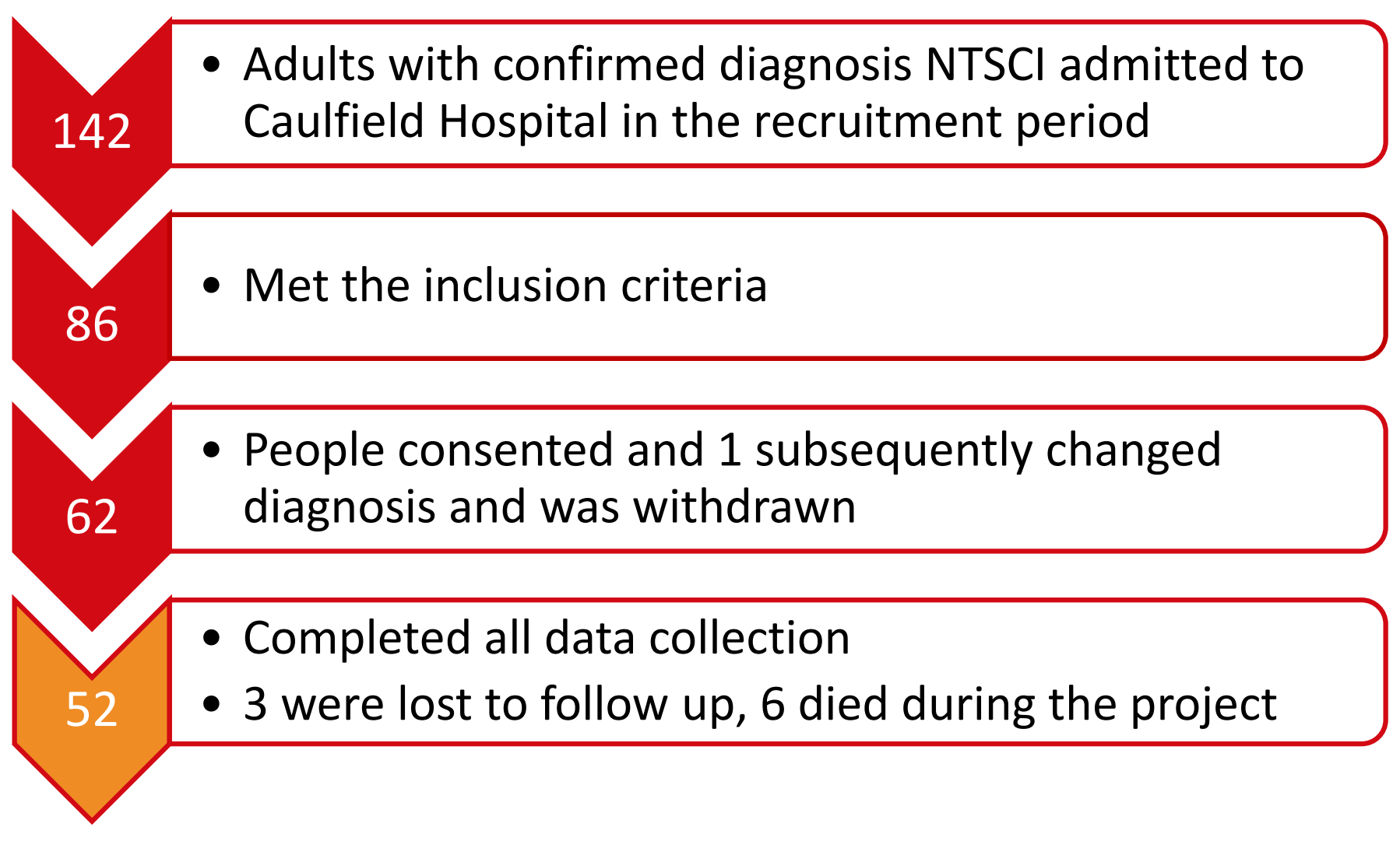
RESULTS


82.7% Overall Accuracy

95.6% Accuracy when predicted not to walk

72.4% Accuracy when predicted to walk

Figure 2: Calculated accuracy of the CPR for the overall cohort and then with analysis of accuracy by prediction of walking or not walking using the CPR. This is the first time the CPR has been investigated for accuracy by classification of walking or not walking.


142
- Adults with confirmed diagnosis NTSCI admitted to Caulfield Hospital in the recruitment period

86
- Met the inclusion criteria

62
- People consented and 1 subsequently changed diagnosis and was withdrawn

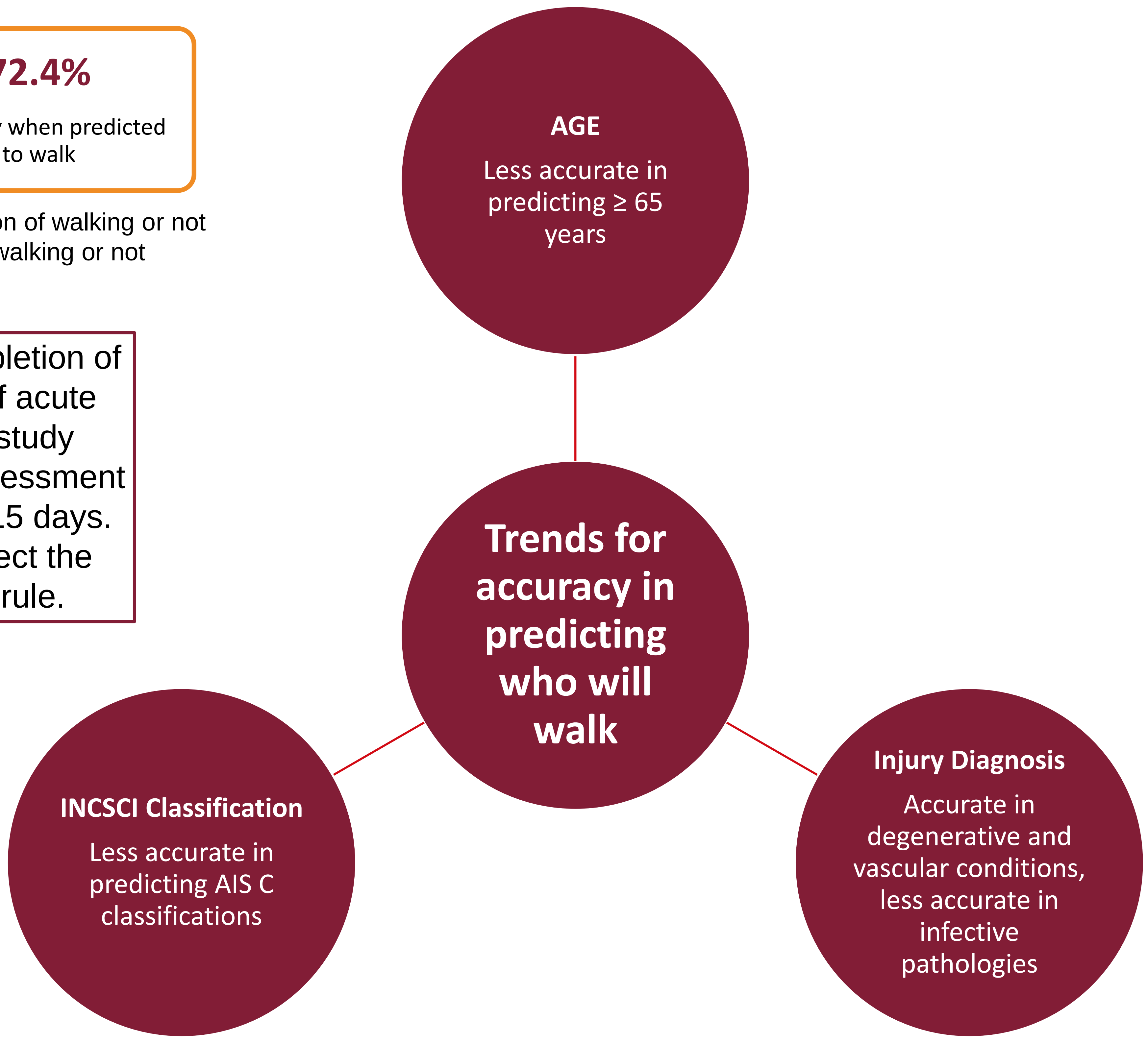
52
- Completed all data collection
- 3 were lost to follow up, 6 died during the project

Figure 3: Recruitment details.

43 days mean time to completion of initial INCSCI from date of acute admission. The original study excluded patients if this assessment was not completed within 15 days. This did not appear to affect the overall accuracy of this rule.

Rule		**AUC**	**CI 95%**
Present study	6 months	0.933	0.859 – 1.00
	12 months	0.935	0.855 – 1.00
van Middendorp	Original CPR	0·956	0·936–0·976
	Validation	0·967	0·939–0·995
van Silfhout		0·939	0.892, 0.986
Malla		0.956	0.936 – 0.976

Table 1: AUC for this study in comparison to the original van Middendorp study and subsequent validations of this CPR for traumatic spinal cord injury.


Trends for accuracy in predicting who will walk

AGE
Less accurate in predicting ≥ 65 years

INCSCI Classification
Less accurate in predicting AIS C classifications

Injury Diagnosis
Accurate in degenerative and vascular conditions, less accurate in infective pathologies

Figure 4: Trends identified in data analysis to determine if the rule was influenced by age, diagnosis or injury classification in this NTSCI population. The sample size of tumour and inflammatory pathologies were to small to identify trends.

CONCLUSION

- The van Middendorp CPR appears to work well in the NTSCI population with a similar AUC to the original study.
- Its accuracy to predict those who cannot walk is particularly useful in clinical practice.
- Further studies are recommended to determine how to strengthen this CPR in the NTSCI population to increase its accuracy in predicting who will walk and to determine the overall impact of AIS classification, diagnosis and age on the accuracy of this rule in clinical practice.
- It should be used judiciously when applied to individuals with an AIS C classification.

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"Horrible Imaginings" : Anxiety and Rehabilitation Outcomes in Cardiac Patients

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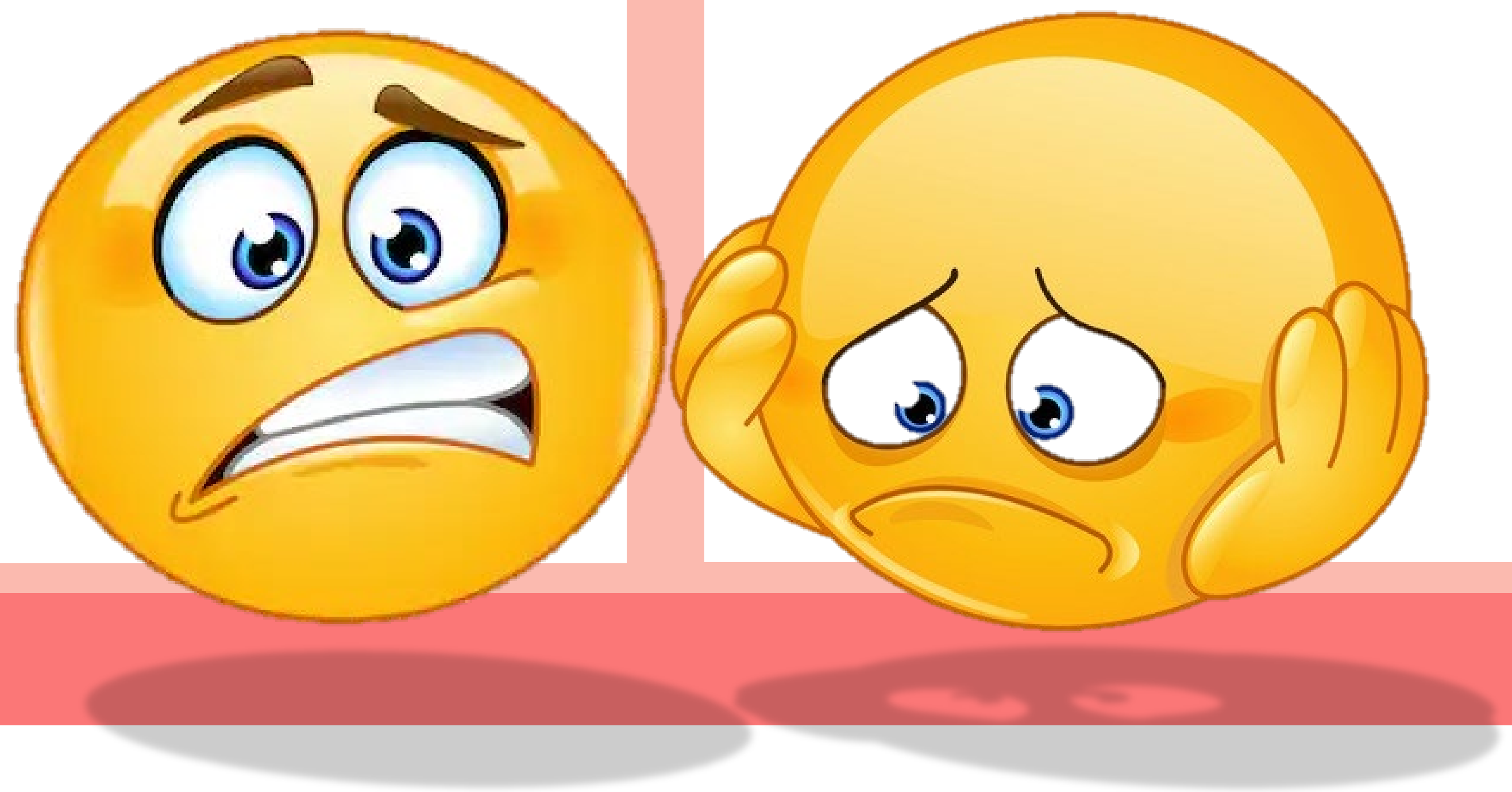
3.EPWORTH MONASH REHABILITATION MEDICINE UNIT

INTRODUCTION

- Negative emotional states such as anxiety appear to be strongly associated with cardiovascular events.
- Approximately 10% of patients with cardiovascular disease and living in Western countries are affected by anxiety[1].
- Anxiety following a major cardiac event can impede recovery, and is associated with a higher morbidity and mortality[2,3].
- Anxiety may also have behavioural or psychological consequences when it is persistent or severe, including difficulty adhering to prescribed treatments and making recommended lifestyle changes in heart disease[4].
- Its importance is often unrecognised by healthcare providers[5].

This study aimed to establish the prevalence of anxiety in cardiac rehabilitation patients, its impact on rehabilitation outcomes, and the change in anxiety levels during rehabilitation.

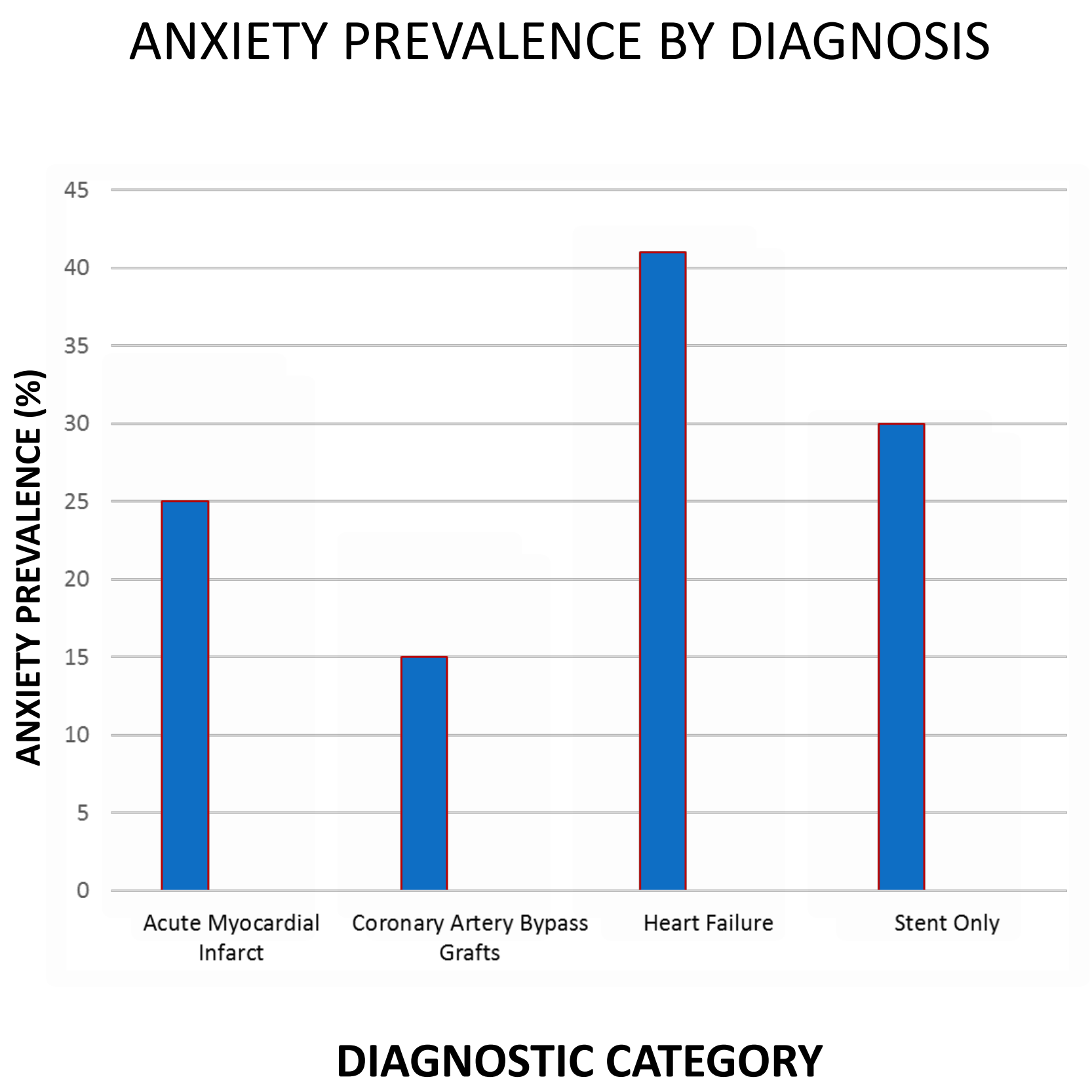


METHODS

- **411** cardiac patients who underwent outpatient cardiac rehabilitation completed an anxiety measure (Hospital Anxiety and Depression Scale) on admission and discharge. This well-validated scale includes questions about "*worrying thoughts*", "*panic*" and "*frightened feelings*".
- Patients also completed:
    - demographic questions, including those regarding return to work and social support.
    - A 6 Minute Walk Test on admission and discharge.
- Rehabilitation goals were set on admission and reviewed on discharge.
- Body composition was also measured on admission and discharge.
- A subset of **210** patients completed a health-related Quality of Life (QOL) questionnaire (Short Form -36).
- Statistical analysis included:
    - Prevalence of anxiety.
    - *t*-tests and chi-square analyses to examine differences between anxious and non-anxious patients.
    - A regression analysis to examine the relationship between anxiety and other rehabilitation factors.

RESULTS

- **26%** of patients presented with anxious mood on admission to cardiac rehabilitation.
- This dropped to **19%** by discharge.
- Anxiety was significantly more prevalent in female than in male patients (**40%** vs **23%**; p = .001).
- The highest prevalence of anxiety was observed in heart failure patients; the lowest was in patients post coronary artery bypass grafts (Graph).



On admission, anxious patients had significantly:

- poorer exercise capacity (p = .002),
- higher percentage of body fat (p = .004),
- less social support (p =.03),
- poorer quality of life (QOL) in all domains (p < .001), which persisted at discharge.

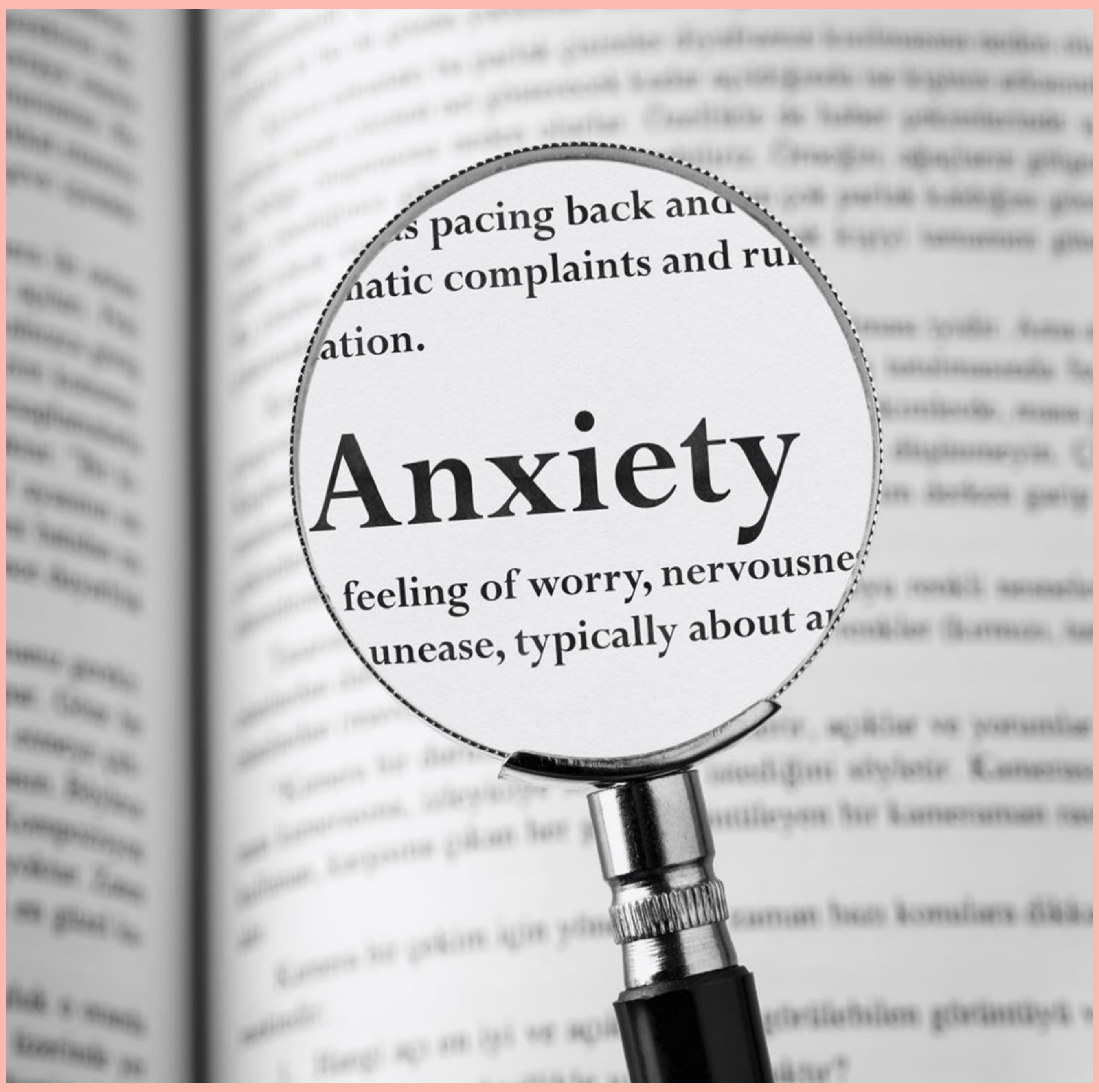
Anxiety at discharge was associated with not achieving rehabilitation goals (p = .009).

Fewer anxious patients, compared with non-anxious patients, had returned to work by discharge (65% vs. 86%; p = .002).

Anxiety on admission and discharge correlated significantly with all QOL domains (p < .001).

Backward Elimination Regression* revealed that anxiety at discharge accounted for **43% of variance in Quality of Life domains.** (Vitality/Pain/Role Emotional)

*The "Mental Health" domain of the SF-36 was omitted as it would over-inflate the regression result.



CONCLUSIONS

- Anxiety affects one in four patients attending cardiac rehabilitation, similar to previous studies of coronary artery patients[6].
- The highest prevalence of anxiety was observed in heart failure patients (41%) consistent with published literature[7].
- There was a reduction in the prevalence of anxiety by discharge from rehabilitation.
- Anxiety is associated with poorer rehabilitation outcomes, including exercise capacity, adherence to exercise, return to work and health-related quality of life.
- Anxiety accounts for nearly half the variance in quality of life domains at discharge.
- **<u>NEXT STEPS</u>: To further study the role of cardiac rehabilitation in helping patients reduce the deleterious effects of anxiety on health.**

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The authors wish to thank all Cardiac Rehabilitation Unit staff and patients who contributed to this study

Does silicone sheeting enhance sternotomy wound healing following cardiac surgery? A randomised controlled study.

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1.CARDIAC REHABILITATION UNIT, CAULFIELD HOSPITAL, ALFRED HEALTH
2.EPWORTH MONASH REHABILITATION MEDICINE UNIT
3.ASPEX CONSULTING, MELBOURNE

What was the aim of the study?

This study was conducted to evaluate the impact of silicone sheeting, compared with general wound care advice provided during cardiac rehabilitation, on sternotomy wound outcomes following cardiac surgery.

The secondary aim was to examine the relationship between subjective wound assessments and objective scar measurements.

Why is it important now?

There is a widespread belief that keloid scarring and scar discomfort post-surgery can be prevented by the use of silicone sheeting.[1]

However, this is an expensive treatment option and previous studies of silicone sheeting on sternotomy scars have been poorly designed with susceptibility to bias and lack of clear randomisation or blinding of observers.[2]

There have been no formal studies of scar management using silicone sheeting on Australian cardiac patients.

1. Hsu KC, Luan CW, Tsai YW. Review of Silicone Gel Sheeting and Silicone Gel for the Prevention of Hypertrophic Scars and Keloids. Wounds. 2017 May;29(5):154-158.

2. O'Brien L, Jones DJ. Silicone gel sheeting for preventing and treating hypertrophic and keloid scars. Cochrane Database Syst Rev. 2013 Sep 12;(9):CD003826.

What did we do?

A prospective, randomised, observer-blinded study was performed on **78** cardiac rehabilitation patients with recently-healed sternotomy scars, randomised into either

- *a **treatment group** (n = 42) with silicone sheeting (Mepiform) or*
- *a **control group** (usual care) (n = 36).*

The treatment group applied the silicone sheeting to their scars for up to six months following initial assessment.

The control group were given general wound care advice by an occupational therapist.

Scar assessments were performed on admission to rehabilitation (baseline) and 6 months post-discharge (follow-up), using the Patient and Observer Scar Assessment Scale (POSAS), plus scar measurements.

Scars were rated on features including colour, vascularity, pliability and thickness.

Participants also rated scar pain and itch.

An overall scar score was also calculated by both participants and observers.

Observers were blinded regarding which group each participant belonged.

Descriptive statistics were calculated for clinical and demographic characteristics.

Chi-square tests measured differences between groups in categorical variables (e.g. sex).

Mann–Whitney *U* tests examined age, BMI, scar dimensions, each POSAS component, the total score and the overall opinion for both observer & patient scales.

Relationships between POSAS, scar dimensions and QOL were examined using Pearson's correlations.

p values of <.05 were considered significant.

What did we find?

Table 1: Baseline Characteristics

Characteristic	INTERVENTION GROUP	CONTROL GROUP
Patients, No. (%)	42 (54)	36 (46)
Age, median (IQR), y	60.5 (57 – 67.8)	64 (55.8 – 67) *
Sex, No. (%)		
• Male	33 (78.6)	31 (86.1) *
• Female	9 (21.4)	5 (13.9) *
Body Mass Index, median (IQR), kg/m^2	26.5 (24.5 – 29.2)	26.4 (25.0 – 30.3) *

* Difference between control and intervention groups is non-significant

There was no statistically significant difference between treatment and control groups in the POSAS scar categories.

In particular, there was no difference between groups in aesthetic outcome using either the patients' scores or observers' ratings.

Pearson's correlations (*r*) revealed significant relationships between observer ratings, patient ratings and scar measurements.

These correlations were greatest at follow-up (Table 2).

Table 2: Correlations between Observer Ratings, Patient Ratings and Scar Measurements at Follow-up

	Observer Overall Opinion of Scar	Patient Overall Opinion of Scar	Scar Width	Scar Vertical Height
Observer Overall Opinion of Scar		.666*	.457*	.411*
Patient Overall Opinion of Scar	.666*		.352*	.348*
Scar Width	.457*	.352*		.382*
Scar Vertical Height	.411*	.348*	.382*	

* p ≤ .001

Conclusions

- **This is the first well designed study of silicone sheeting for Australian cardiac patients' sternotomy scars using adequate randomisation methods and blinding of observers.**
- **Subjective ratings by observers correlate significantly with those of patients and with objective scar measurements, supporting the validity of staff assessments of sternotomy scars.**
- **Silicone sheeting provided no significant advantage over general wound care advice regarding the comfort, appearance and vascularity of sternotomy scars post-cardiac surgery.**
- **These findings should be used to guide cost-effective wound care in cardiac rehabilitation patients.**

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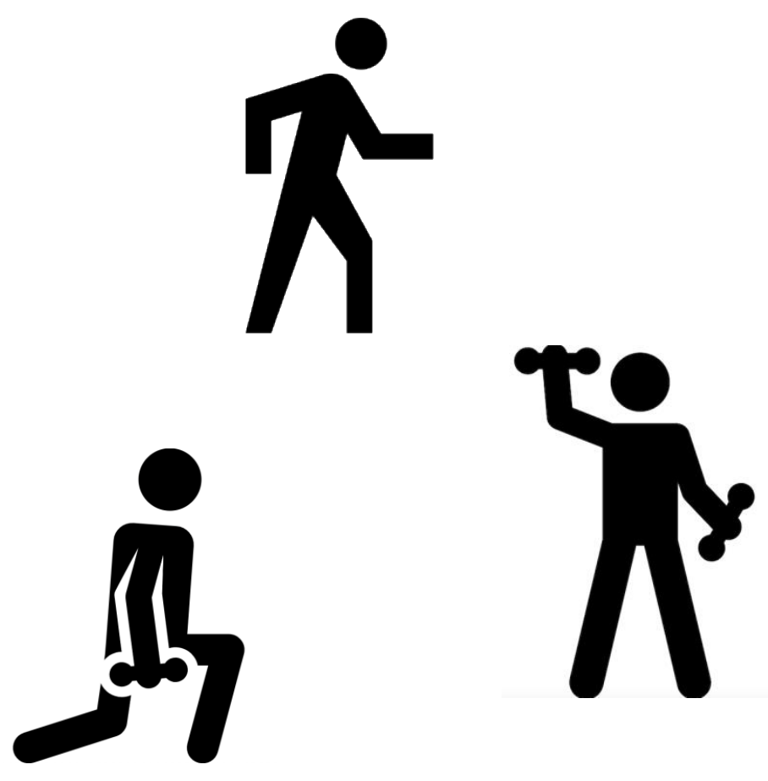
The authors wish to thank all Cardiac Rehabilitation Unit patients who contributed to this study

MONASH University

Caulfield HOSPITAL

Adherence rates to home exercise programs in older adults following hip fracture: a systematic review and meta-analysis



L Yau[1], K Soutter[1], H Curtis[1], S-E Soh[2]
1 Department of Physiotherapy, Alfred Health 2 Department of Physiotherapy, Monash University

INTRODUCTION

This review aimed to determine the adherence rates to prescribed home exercise programs (HEP) in older adults following a hip fracture

Secondary aim: To determine the differences in adherence rates between shorter (<6 months) and longer (>6 months) HEP in older patients who have undergone surgery following a fractured hip.

- Hip fractures are a significant cause of mortality, morbidity, loss of independence and financial burden in older adults and on the Australian Health Care system[1].
- HEP have shown to be effective for improving function in older patients following surgery for hip fractures[2] and may be an effective strategy in reducing financial burden on the health care system.
- Patient adherence is an essential component for success of rehabilitation outcomes, with many complex factors influencing adherence to therapy. Adherence rates to HEP vary greatly in current literature due to a range of variables including personal characteristics, injury variables, treatment variables and patient-clinician interaction[3]. This systematic review was completed focusing on adherence rates in this population post hip fracture.

METHODS

Design

- Systematic Review

Databases searched

- Ovid MEDLINE, Cochrane Library and PEDro

Search strategy

- Older adults
- Home exercise program
- Surgically managed hip fractures

Selection criteria

- RCT
- Published in English
- Intervention included HEP
- Adherence rates
- 60 years or older
- Hip fracture surgically managed
- Community dwelling

Data extraction and appraisal

- Two independent assessors
- PEDro scale

Meta-analysis

- Random-effects meta-analysis of participant adherence rates was performed using a DerSimonian-Laird model
- Variances of raw proportions were transformed using Stata

RESULTS

6 studies (Fig 1) were included with a total of 683 participants over 60 years, dwelling in the community who had undergone hip surgery post fracture. Mean PEDro score was 6.2 (range 3-8). The primary meta-analysis of all studies showed a pooled adherence rate of 61% (95%CI 0.53, 0.68) of sessions completed, with results ranging from 45-82% (Fig 2). In secondary analysis HEP less than 6-months duration, pooled adherence rates were 71% (95% CI 0.63, 0.79). HEP longer than 6 months had a pooled adherence rate of 55% (95% CI 0.48, 0.63).

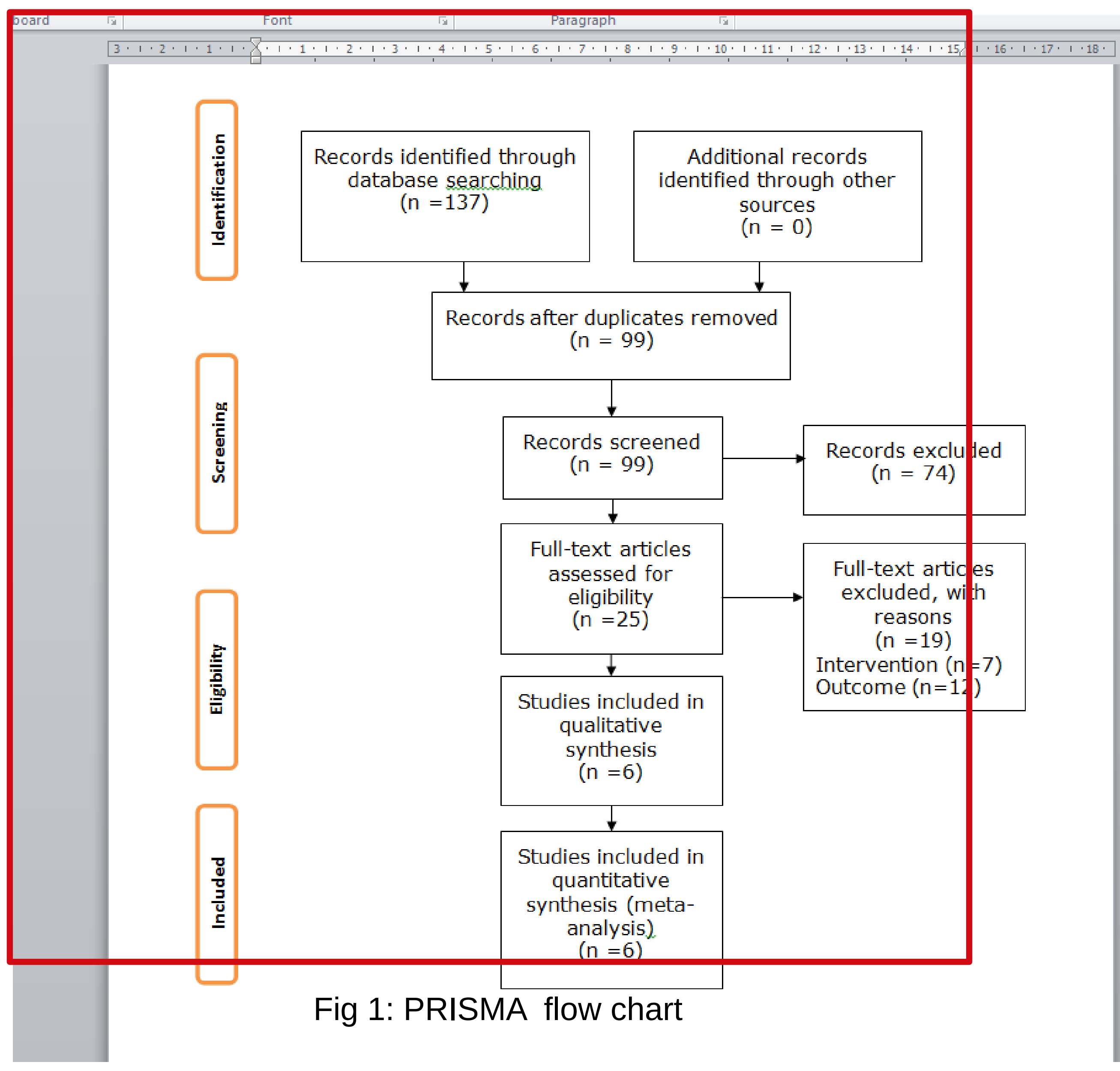


Fig 1: PRISMA flow chart

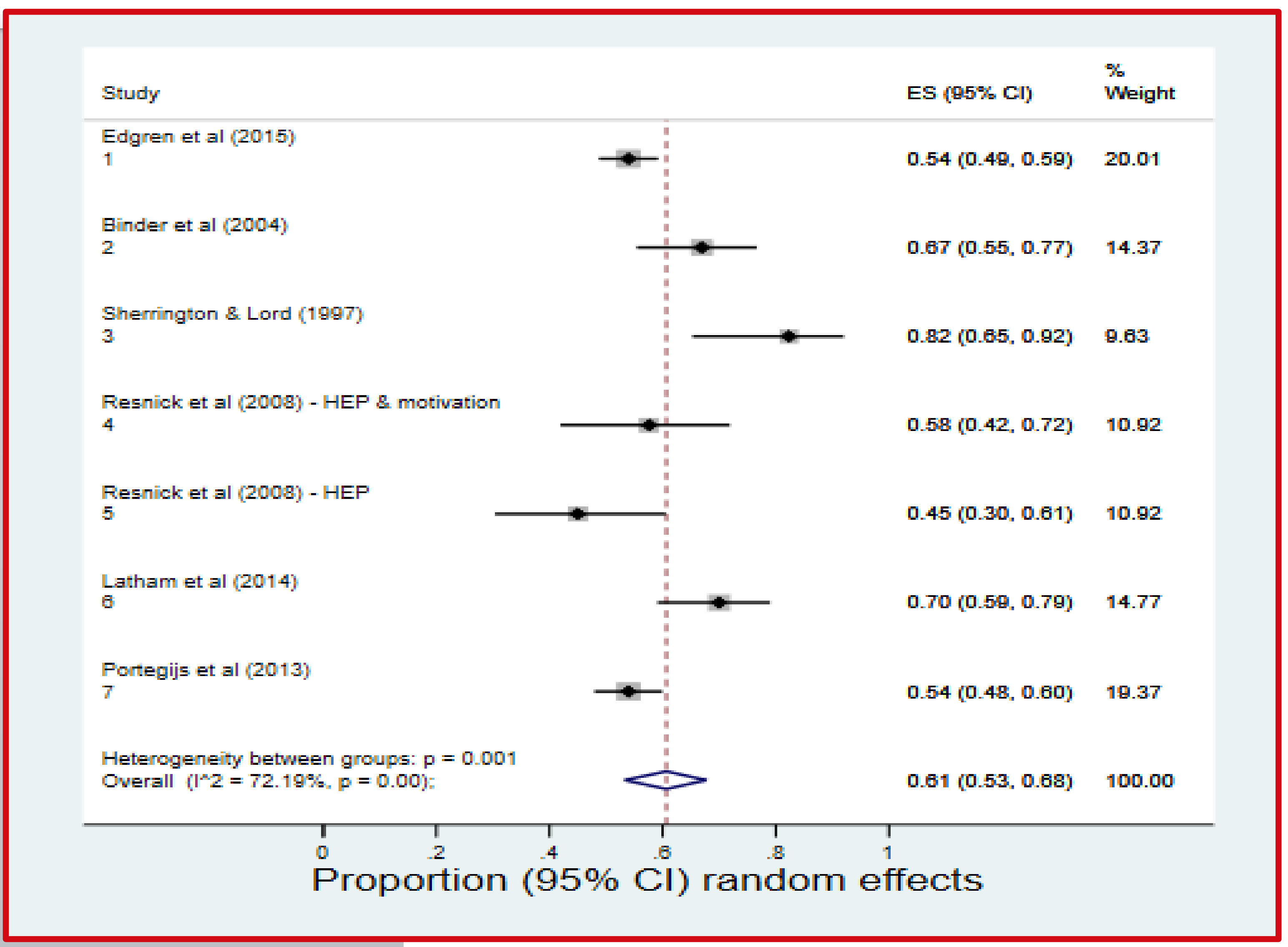


Fig 2: Random-effects meta-analysis forest plot displaying proportion of older adults fully adherent to a HEP following a hip fracture

DISCUSSION

The analysis conducted showed pooled adherence to HEPs to be 61% across studies. This is higher than the results of 35-50% adherence to HEP in musculoskeletal conditions. The secondary analysis showed interventions lasting 12 months showed a reduced adherence of 56% after pooled data analysis.

HEP are important in the improvement of patients function post surgical management of fractured hips[1]. Adherence rates to HEP are low in this population, however not as low as those reported for general musculoskeletal conditions. This review has also shown that short periods of home exercise programs are adhered to more commonly that 12 month long programs. This review did not look at the characteristics of HEPs beyond intervention length that may affect adherence rates.

Overall further research is needed to develop a clear understanding of the factors that effect adherence to home exercise programs in this population
.

The results highlight the need for clinicians to consider the length of their interventions and service provision for older adults following a hip fracture.

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Better Outcomes for Children

Early identification and intervention through the development and implementation of a Comprehensive Screening Assessment (CSAX) for children and families.

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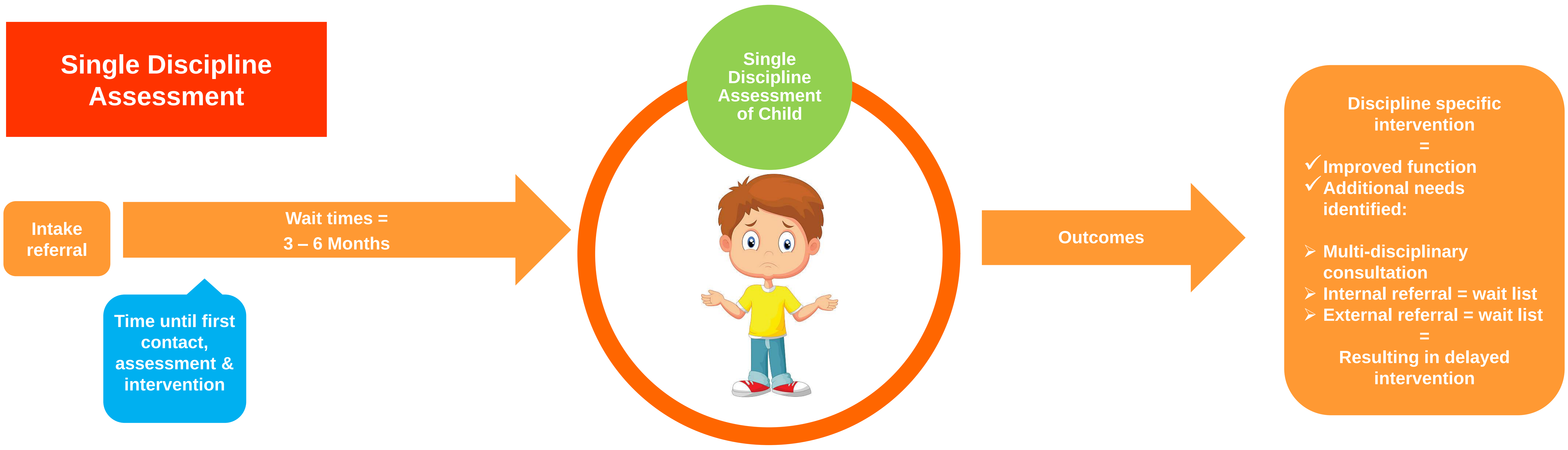
Background

Children referred to a CYF (Child, Youth & Family) clinician often waited long periods of time, without a comprehensive, multi-disciplinary assessment of their needs, eligibility and risk factors. Best practice principles in early childhood promote early identification, assessment and intervention in order to prevent and minimize the negative effects of child developmental issues.

Aim

The aim of the quality improvement initiative was to design and implement a Comprehensive Screening Assessment (CSAX) tool that assesses key developmental domains, family functioning and risk, to provide timely access to multi-disciplinary co-ordinated care.



Single Discipline Assessment

Intake referral

Wait times = 3 – 6 Months

Time until first contact, assessment & intervention

Single Discipline Assessment of Child

Outcomes

Discipline specific intervention
=
- ✓ Improved function
- ✓ Additional needs identified:

- ➢ Multi-disciplinary consultation
- ➢ Internal referral = wait list
- ➢ External referral = wait list

=
Resulting in delayed intervention

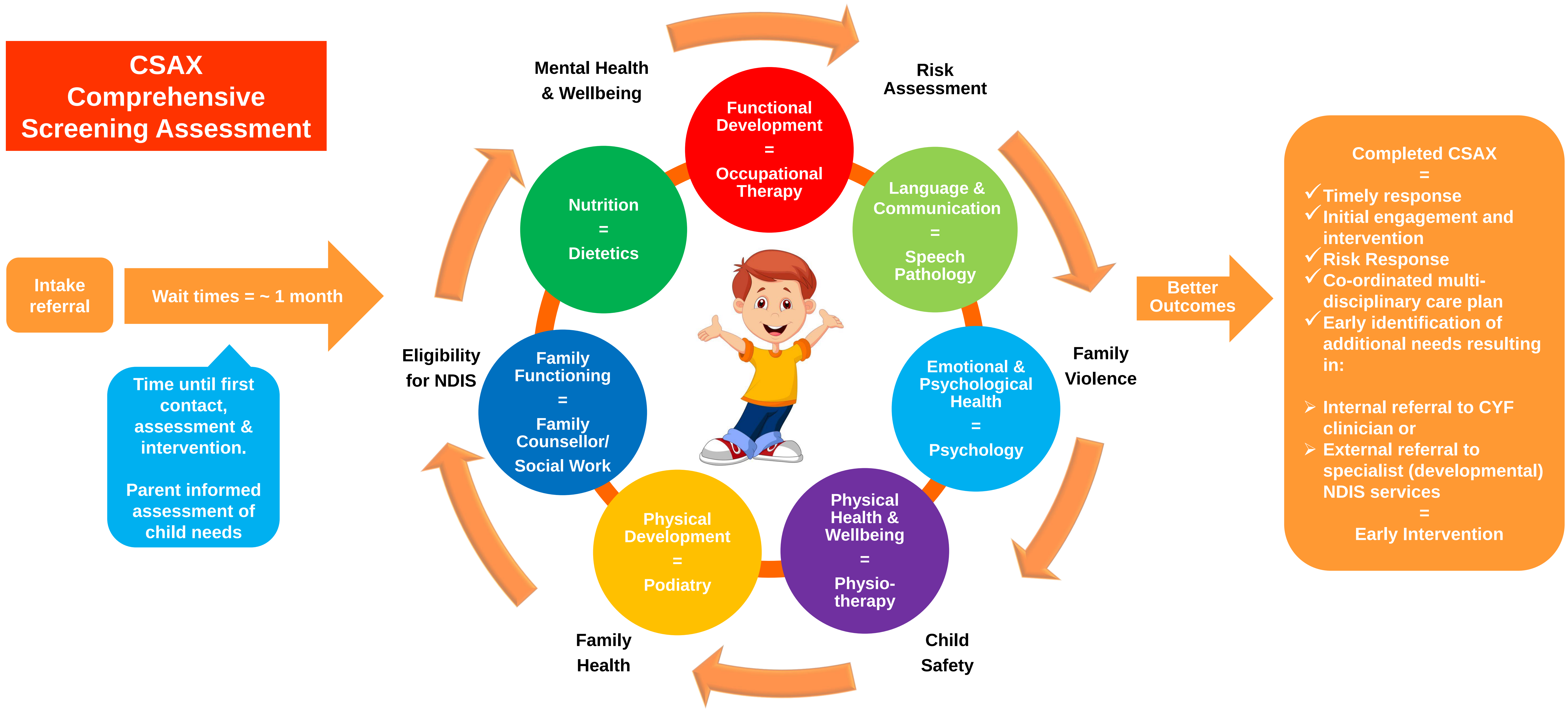
Methods

The quality improvement initiative applied process redesign methodology including best practice research and benchmarking, to develop and pilot a comprehensive assessment tool that assessed key developmental domains, family functioning and risk. The implementation of the tool generated improved processes including a centralised waiting list, specialised triage processing, and regular intake and allocation meetings. The improvement activity was implemented over an 18 month period within the CYF team.

Results

Prior to implementation of the CSAX, wait times for high demand services averaged between 3 - 6 months until initial clinical contact and intervention. Discipline specific assessments were undertaken based on clinician availability and comprehensive screening was inconsistently applied.

Post project implementation, the CSAX tool is administered to new clients by an allocated CYF clinician within 4 weeks of referral. The tool comprehensively assesses key developmental domains, family functioning and risk which informs intervention. The project has also resulted in consistent processes including a centralised waiting list, specialised triage, allocation, prompt and clear referral pathways.



CSAX Comprehensive Screening Assessment

Intake referral

Wait times = ~ 1 month

Time until first contact, assessment & intervention.

Parent informed assessment of child needs

Mental Health & Wellbeing

Risk Assessment

Functional Development = Occupational Therapy

Language & Communication = Speech Pathology

Emotional & Psychological Health = Psychology

Physical Health & Wellbeing = Physio-therapy

Physical Development = Podiatry

Family Functioning = Family Counsellor/ Social Work

Nutrition = Dietetics

Family Violence

Child Safety

Family Health

Eligibility for NDIS

Better Outcomes

Completed CSAX
=
- ✓ Timely response
- ✓ Initial engagement and intervention
- ✓ Risk Response
- ✓ Co-ordinated multi-disciplinary care plan
- ✓ Early identification of additional needs resulting in:

- ➢ Internal referral to CYF clinician or
- ➢ External referral to specialist (developmental) NDIS services

=
Early Intervention

Discussion

The implementation of the CSAX tool ensures that children and families receive timely and comprehensive screening that promotes early identification of needs, addresses risk and results in coordinated multidisciplinary care planning. This promotes early intervention and enhances family centred care which contributes to better outcomes for children and their families. The project has formalised multi-disciplinary processes and enhanced clinical knowledge and expertise across the CYF team.

Conclusion

Best practice principles in early childhood promote early identification, assessment and intervention, in order to prevent and minimize the negative effects of child developmental issues. The CSAX tool and associated processes successfully ensure that the CYF team are promoting best practice in early childhood intervention, through early identification of key child developmental domains, family functioning and risk. This has resulted in better outcomes for children by providing timely interventions to children and their families. Following the CSAX, children identified as requiring further evaluation will now be offered a direct clinical assessment to better inform their care.

AgeXchange: Bringing Together Generations

Collins LJ, Darmenia JM, Opeskin HM
Population Health Team, Caulfield Community Health Service, Alfred Health

Introduction

Building relationships and connections across generations can benefit older adults, children and the community by reducing social isolation in older adults and improving children's social skills, knowledge and attitudes towards ageing[1,2].

Aim:
The AgeXchange program aims to improve the health and wellbeing of children and older adults by creating purposeful ongoing exchanges of learning, and foster meaningful interactions across generations.

The program has been run since 2015 and to date has been successful in the community. To ensure its ongoing effectiveness, a review was undertaken in 2019.

AgeXchange project team, participants and volunteers

Outcomes

The program to date has run:

- six sessions; and
- on average 17 participants attended each session

Feedback to date indicates that changes made to the program have been successful:

The introductory phone call established a rapport between the project team and volunteers

"I really appreciated the phone call, it made me feel welcome" - Volunteer

Volunteers have expressed enjoyment in their role

"I really like being here, I don't have grand-children so I have loved being involved with the children and residents with the activities, it's a lot of fun" - Volunteer

Feedback about the project plan has been positive

"It was great to have a detailed project plan with dates and activities and clear communication" - Caulfield Primary School Teacher

The care of the residents

"Just like to extend gratitude to Josh and Laura and all the volunteers, teachers and students for engaging our residents, thank you very much" - Hammond Care Staff

"Some residents are asking already when are the children coming back with large smiles; and they are proud to have been able to share part of their lives in the hope of making an impact or difference" - Hammond Care Staff

Process

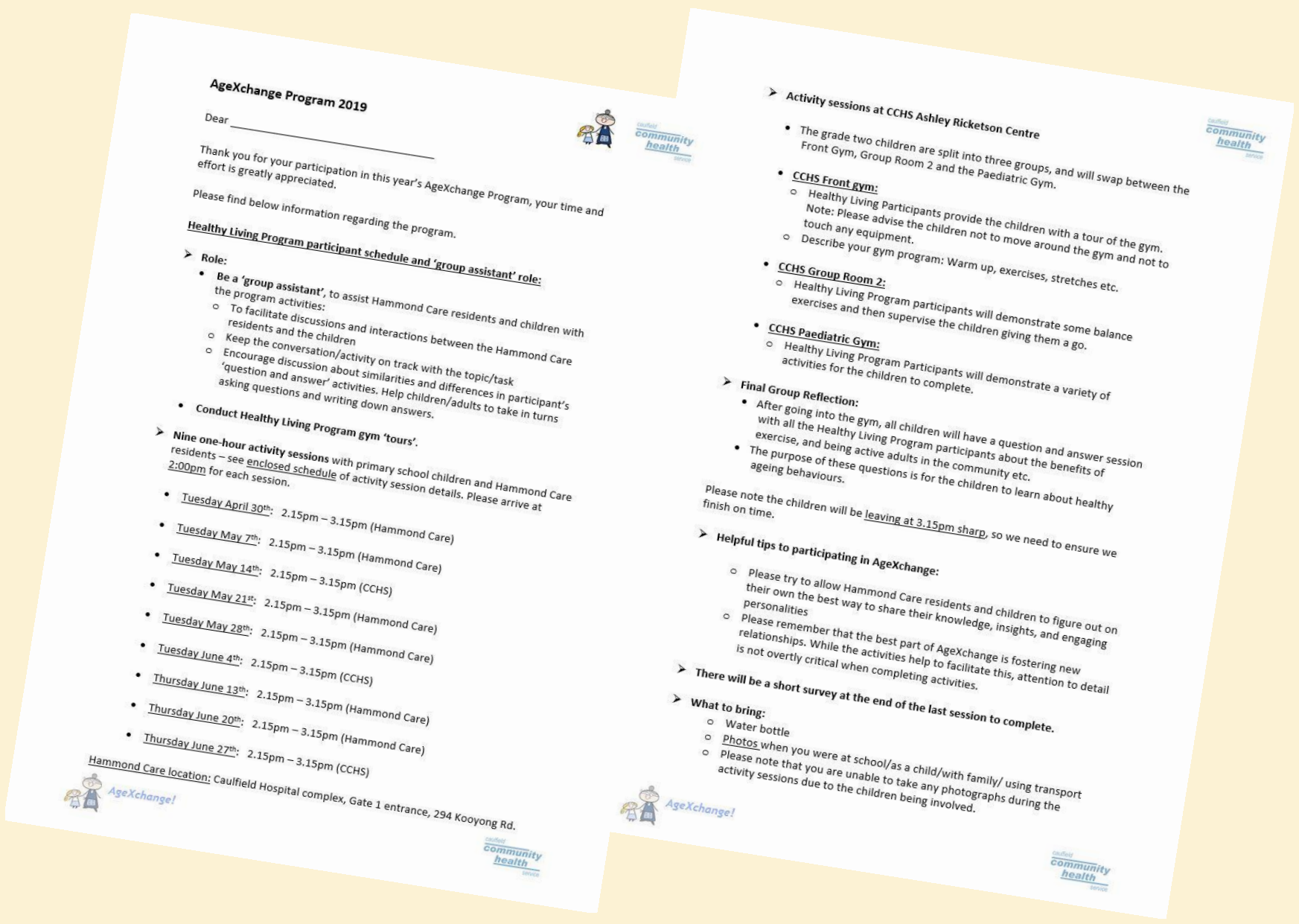
A comprehensive evaluation of the program's processes was undertaken. This included: process evaluation of roles and responsibilities, volunteer recruitment pack (Figure 1), session plans and participant surveys (Figure 2-3).

As a result, these areas were identified for development:

- roles and responsibilities of project team members
- volunteer recruitment
- session plans

A project plan was devised to clearly outline each phase of the program and each project team member's responsibility. It was identified that volunteer recruitment was important to the program, and volunteers were given an introductory phone call and information pack upon recruitment.

Figure 1. Pre-survey student responses for Group 1



AgeXchange participants making 'chatterboxes'

Discussion

With the conclusion of the first three sessions of AgeXchange, participant feedback has revealed that the program is a valuable means for creating meaningful interactions across generations. However, the program has not been without its limitations. Initial evaluation indicates that resident participation rates vary according to their unpredictable health and wellbeing. This makes it difficult for students to engage with the same residents each week and build a rapport. This also impacted on their ability to complete pre and post surveys and qualitative feedback was obtained instead. The Population Health Team is monitoring these variables using health promotion process evaluation methods including:

- Weekly project team feedback
- Pre and post surveys
- Volunteer feedback

Figure 2. Pre-survey student responses for Group 1

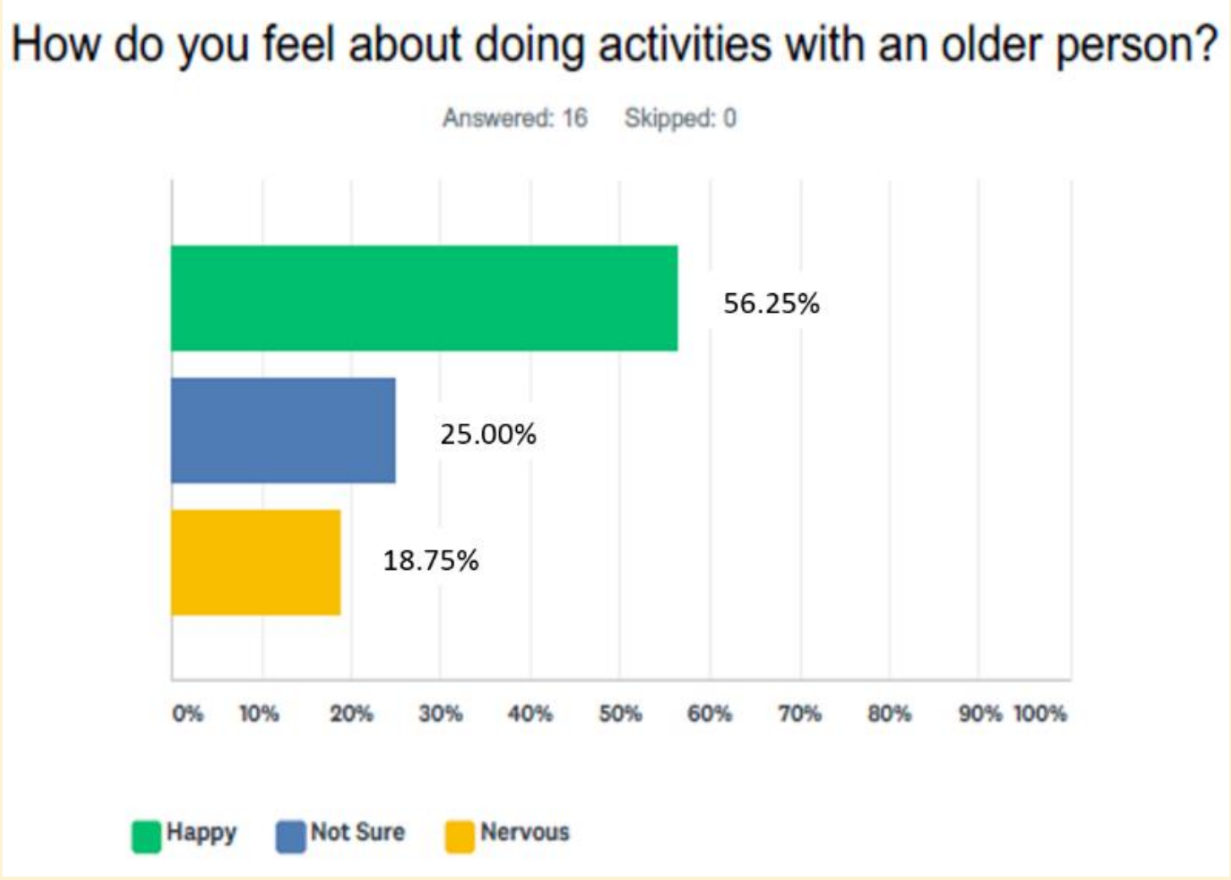
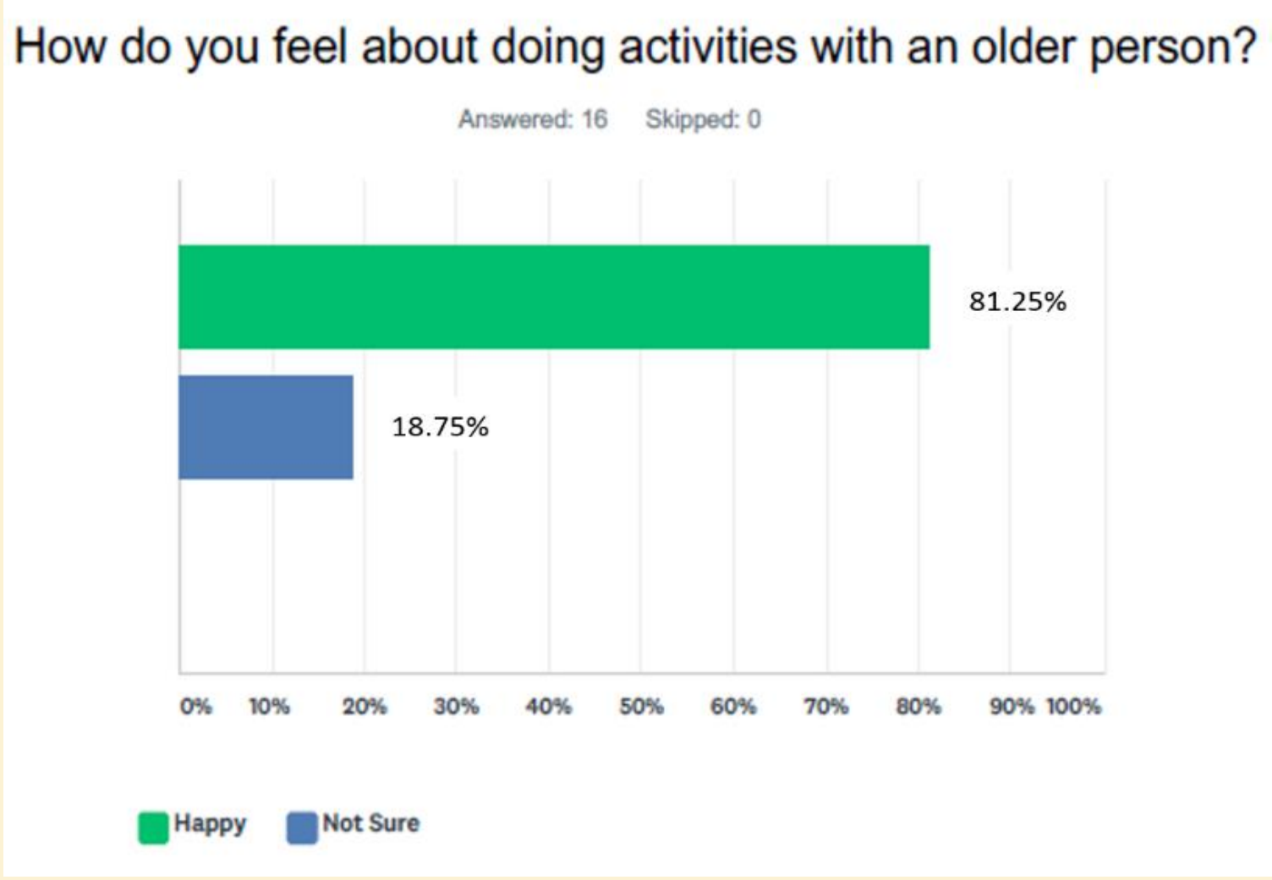


Figure 3. Post-survey student responses for Group 1



Following the completion of the AgeXchange program, 25% of students expressed feeling happier about 'doing activities with an older person'.

Conclusion

The AgeXchange Program has created a welcoming space for students, residents and volunteers to share stories and develop their social skills together. The Population Health Team will continue to implement changes through recurring evaluation to create a sustainable program that brings together generations.

References

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Caulfield
HOSPITAL

Life Café (Pilot study): a move from knowing to doing to improve quality of life for older adults.

Disisha Doshi, Clint Wilkie, Hannah Opeskin
Population Health Team, Caulfield Community Health Service (CCHS), Alfred Health

Introduction

Life Café is a group for older adults to empower change and improve quality of life. Originally developed in Sweden, the program aims to influence health and well being through lifestyle habits and patterns. The program provides a new environment and opportunity to meet with like-minded individuals and exchange experiences, thoughts and knowledge about a variety of health topics.

Methods

CCHS's Healthy Living Program participants identified 6 themes to discuss:

- Falls
- Self Care
- Acceptance of age , physical inabilities and living skills
- Loneliness
- Navigating through the medical system and aged care system
- Women's health and Men's health

Within each theme, participants explored their own current health and wellbeing situation and what they believed might be the best possible situation or health outcome.
Each session aimed to address three key questions:

What are we trying to achieve for ourselves?

How will we know that the change is an improvement?

What changes can we make that will result in an improvement?

The above questions were used to guide conversations between participants. Participants were also encouraged to share their own experiences and learn from each other's experiences.

Clinical experts identified by participants were invited to attend for specific topics and evidence based resources were provided.

Results

- 100% of participants expressed that they would recommend this program to their friends and family.

- Between 4- 16 people attended each session.
- Developmental Evaluation was used to reflect and evaluate the impact of the program.
- Evaluation has revealed that participants found the program beneficial for their physical and mental health.
- Participants expressed that sharing their own experiences and learning about other people's experiences in a non -judgemental environment was empowering (Figure 1-2).

"[I learnt] not to be shy in seeking advice/help"

"Learning about health, learning about coping strategies, being aware of our body, mind and functions [impacted me the most]"

""[I was encouraged] to speak up and talk more to others"

"The sessions I attended were very positive and open a few directions for me"

Figure 2. Participant evaluation: What worked well?[1]

Discussion

The program's successes echoed the importance of "learning with peers" particularly among older adults.

Recruitment of participants delayed the start of the program as many participants expressed that sharing their experience would be challenging in group environment

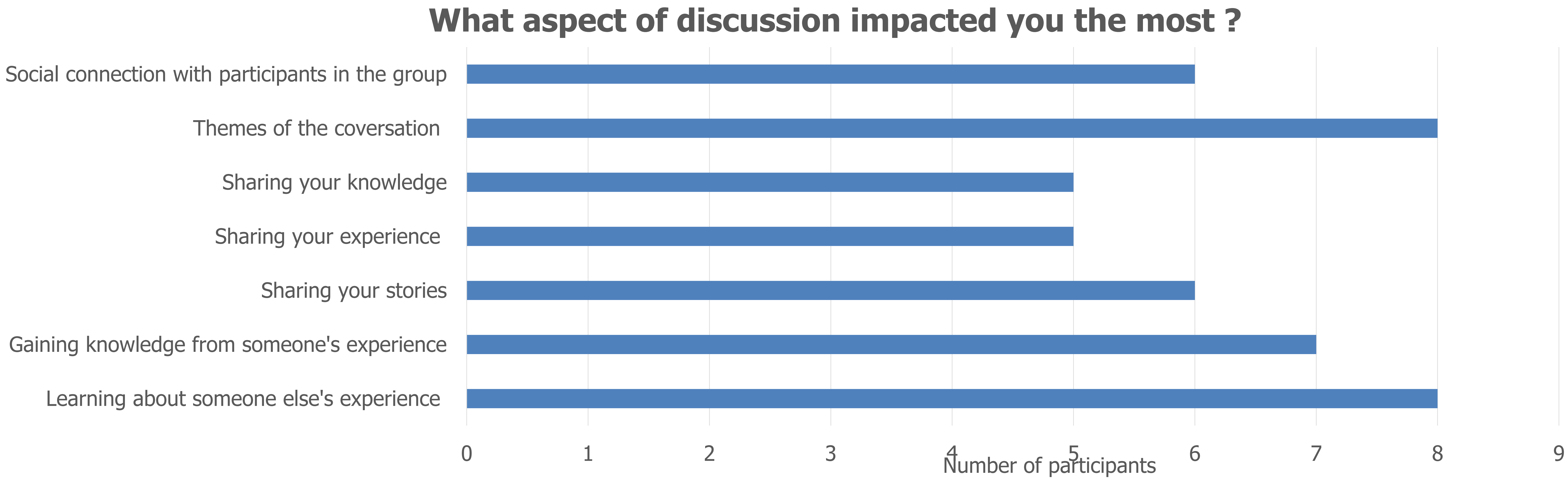
However after attending 2 sessions , several participants recruited additional friends and family expressing that the discussions in the program had been rewarding.

Conclusion

The program has enabled participants to talk more about health subjects which they would not normally discuss. Participants engaged in meaningful conversations which acted as catalyst for changing habits related to health and wellbeing. All participants expressed that the discussions were valuable.

The Health Promotion Team is currently exploring avenues to empower the community to take ownership of the program and continue working on each participant's motivation to improve quality of life.

Figure 1. Participant evaluation



References
1. Image generated from www.worditout.com; created 31 May 2019

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Caulfield HOSPITAL

Evaluation of a Model of Care Utilising Allied Health Assistants to Monitor Nutritional Status in Inpatients in a Subacute Hospital

Griffin H, Panther B, Jackson S , Linossier D, Swan I, Nyulasi I
Alfred Health Nutrition Service

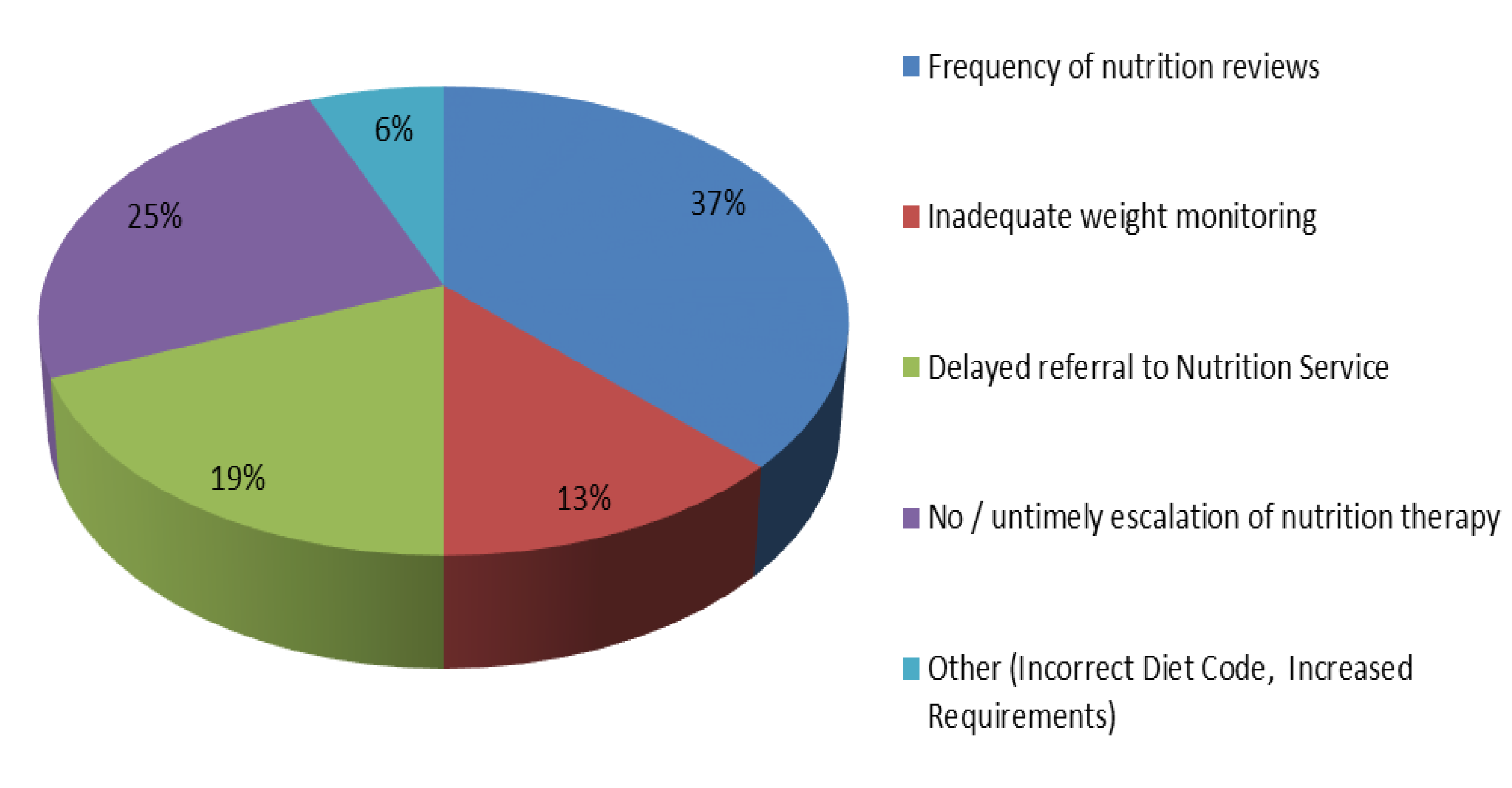
Introduction

- Malnutrition in hospitalised patients is associated with greater risk of healthcare-associated infections, pressure injuries, mortality; and increased length of stay and unplanned readmissions.
- One in three inpatients at Caulfield Hospital is malnourished. Incident reports related to 5% weight loss are useful indicators of hospital acquired malnutrition and the key contributing factors (*see Figure 1*).
- The NSQHS Standards mandates that hospitals identify patients at risk, monitor the nutritional care of these patients and provide appropriate nutrition support as required.
- Current dietetic resources are inadequate to provide safe and effective intervention to all referred patients.
- Caulfield Nutrition implemented a pilot model of care utilising Allied Health Assistant (AHA) resources to support the clinical work of the dietitians.

Aim

To evaluate if a model of care utilising AHAs would mitigate the risk of hospital acquired malnutrition

*Figure 1: Incidents related to 5% Weight loss in Caulfield Hospital July 2017-June 2018: **process factor trends***



Methods

- Over a 4 week period, AHA resources in the Nutrition service were increased from 32 to 64 hours per week.
- A revised Dietitian/AHA co-management model of care was implemented. This included three components;
  - i. A structured clinical supervision framework,
  - ii. Specific clinical indicators for patient suitability/escalation of nutritional care,
  - iii. Streamlined processes to: identify suitably referred patients, delegate to the AHA and support AHA clinical tasks i.e. monitoring patient's nutritional status, identifying patients with deteriorating nutritional status and escalating to dietitian as required.
- Objective outcome measures were time between referral and initial contact with nutrition service, number of patient contacts (occasions of service) with AHA, frequency of AHA nutrition review per patient , and escalation of nutritional therapy. Results of the former three measurements were compared to data from the previous 3 months of service
- A secondary outcome measure was 5% weight loss incidents reported in this period compared to the previous 27 months. Additional monitoring of patients in the pilot model was undertaken to identify those with weight loss that may not be identified via Riskman reporting.

References
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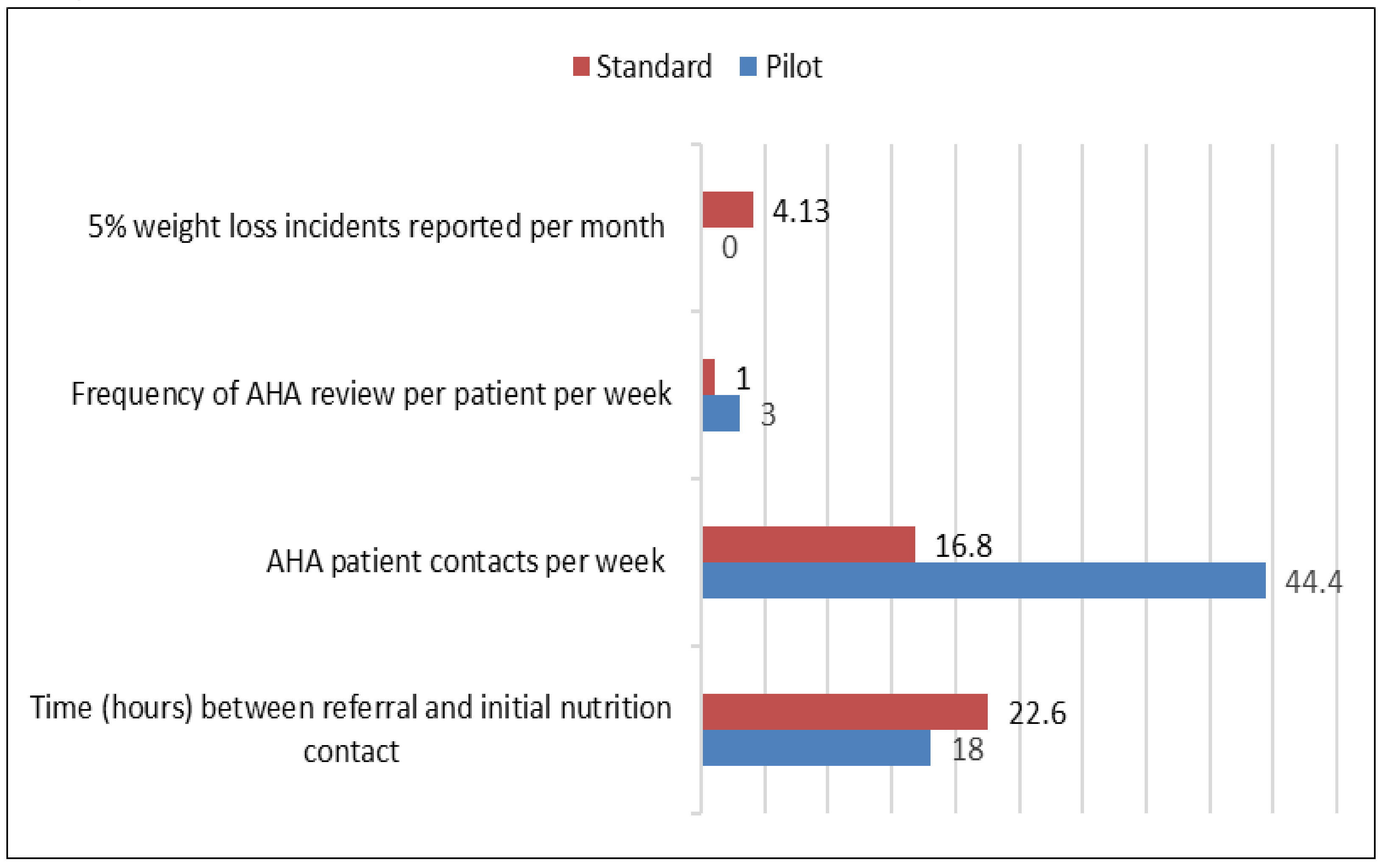
Tappenden et al (2013) Critical role of nutrition in improving quality of care: an interdisciplinary call to action to address adult hospital malnutrition. JPEN ;37(4):482–97.

Results

- Seventy-one patients were seen by the AHA in the pilot phase.
- Figure 2 outlines the differences in the primary outcome measures and 5% weight loss incidents between standard care and the AHA model.
- The median time between referral and initial contact with the nutrition service was reduced by 4.6hours. Patient contacts were increased by 162%.
- The frequency of nutrition review per patient seen by the AHA increased by up to 300%.

Figure 2: Standard care versus AHA model of care



- Twenty seven per cent (n=19) of patients were escalated to the dietitian for more complex interventions.
- Two patients had unintentional weight loss, however all of these were considered to be appropriately managed.
- No Riskman incidents related to 5% weight loss were reported during the pilot phase.

Discussion

- A model of care utilising AHA resources was effective at mitigating nutritional risk and preventing hospital acquired malnutrition.
- Capacity of the service overall was increased and no incidents related to hospital acquired malnutrition during this time were reported.
- Of the 19 patients escalated to the dietitian for more complex management; 2 had weight loss, and none within the parameters that determine a reportable incident for unintentional weight loss. This data is important to consider alongside the absence of 5% weight loss incidents during the pilot phase given the historical variation in incident reporting from month to month.
- The study design is limited by its short duration and relatively small numbers of patients. Analysis of wait times did not consider factors such as when the referral was made, overall service demand versus capacity and clinical prioritisation.
- The model suggests that targeting the key contributing factors in incidents related to 5% weight loss (see Figure 1) is effective at minimising the occurrence and/or severity of hospital acquired malnutrition. Broadening the scope of the AHA to work more autonomously within a structured clinical governance framework is a safe and effective method to do this.

Practice Implications

A model of care utilising AHAs was effective at mitigating nutritional risk and preventing hospital acquired malnutrition.

This model represents a safe, cost effective and efficient method to improve the monitoring of subacute hospital inpatients' nutritional status.

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Stoma education for the older person is about keeping it simple as 1, 2, 3.

Rebecca Howson Stomal Therapy Nurse, Caulfield Hospital

Caulfield
HOSPITAL
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Abstract

Australia's aging population presents unique hurdles when planning, providing care and educating new ostomates; and these variations to care differ greatly depending on the individual. Whilst there are many predictors to flag potential issues, and well planned out pathways for the stoma's physical journey; this is aimed at highlighting the often overlooked and under documented complexities encountered as we navigate patients in the transition to home. This is an example of how not all complications and barriers to discharge are due to the stoma, the output, or any medical issue. It is about the patient's ability to self-manage. This follows the journey of a non-English speaking background patient transferred from the acute setting to rehabilitation. She was struggling to manage her colostomy appliance, which could put her and her husband with dementia into residential care. The ability to self-manage a stoma is often the defining factor to an aged person's ability to return to their lives at home or placed into formal care. Her motivation to prevent placement was demonstrated by her readiness to learn. As a Stomal Therapy Nurse, it is our responsibility to identify the barriers to self-care, adapt product selection and implement the most achievable goals. The patient's specific goals and the interventions produced to achieve these; were individualised so that she is able to return home to continue to live her life; and not dictated by her new stoma. This idea meant that the concept of self-care had to be as simple as 1, 2, 3.

Facts

Typical issues related to aging include loss in dexterity, decreased sensation in their extremities, changes to eyesight, decreased problem solving abilities and slower recall. However the aging brain is still able to learn new skills.[1] Therefore the aging population present an array of issues when trying to educate an individual on how to self-manage their new stoma; and with the world's population ageing rapidly this is an area of particular importance. Between 2015 and 2050, the proportion of the world's older adults is estimated to almost double from about 12% to 22%. In absolute terms, this is an expected increase from 900 million to 2 billion people over the age of 60.[2]

In Australia, the proportion of the population aged 65 years and over increased from 12.2% to 15.7% between 1998 and 2018. This group is projected to increase more rapidly over the next decade, as further cohorts of baby boomers reach 65 years. Also over the past two decades, the number of people aged 85 years and over increased by 125.1%, compared with a total population growth of 34.3% over the same period.[3]

The cultural and linguistic diversity of Australia's resident population has been reshaped over many years by migration. Historically, more people immigrate to, than emigrate from, Australia. At 30 June 2017, 29.0% of the estimated resident population was born overseas (7.1 million persons). This was an increase from 2016, of 28.6% and in 2007, ten years earlier, 25.1% of the population was born overseas.[4]

These statistics highlight that Australia has not only an aging but also a multicultural population, and while interpreters are invaluable assets they are not always available. So how do we provide effective education to this cohort of patients? By keeping it simple; it allows the patients to learn without the need to always have the additional person during all education. Also removing unnecessary products and steps to simplify the process makes the task achievable and increase their likely success.

Introduction

Mrs. R, is an 87 year old non-English speaking background Greek lady. She lived at home with her husband who had dementia and was his primary carer. Since her husband had been placed into respite care; and if she was unable to achieve independence with her colostomy care, her family had discussed permanent placement for both her and her husband. Whilst Mrs. R was able to speak English, an interpreter was utilised during the initial education session to ensure that she expressed the issues with changing her appliance and to have any questions answered. Prior to Stomal Therapy Nurse review it was documented that Mrs. R was requiring assistance with all aspects related to her colostomy care.

Welland Medical

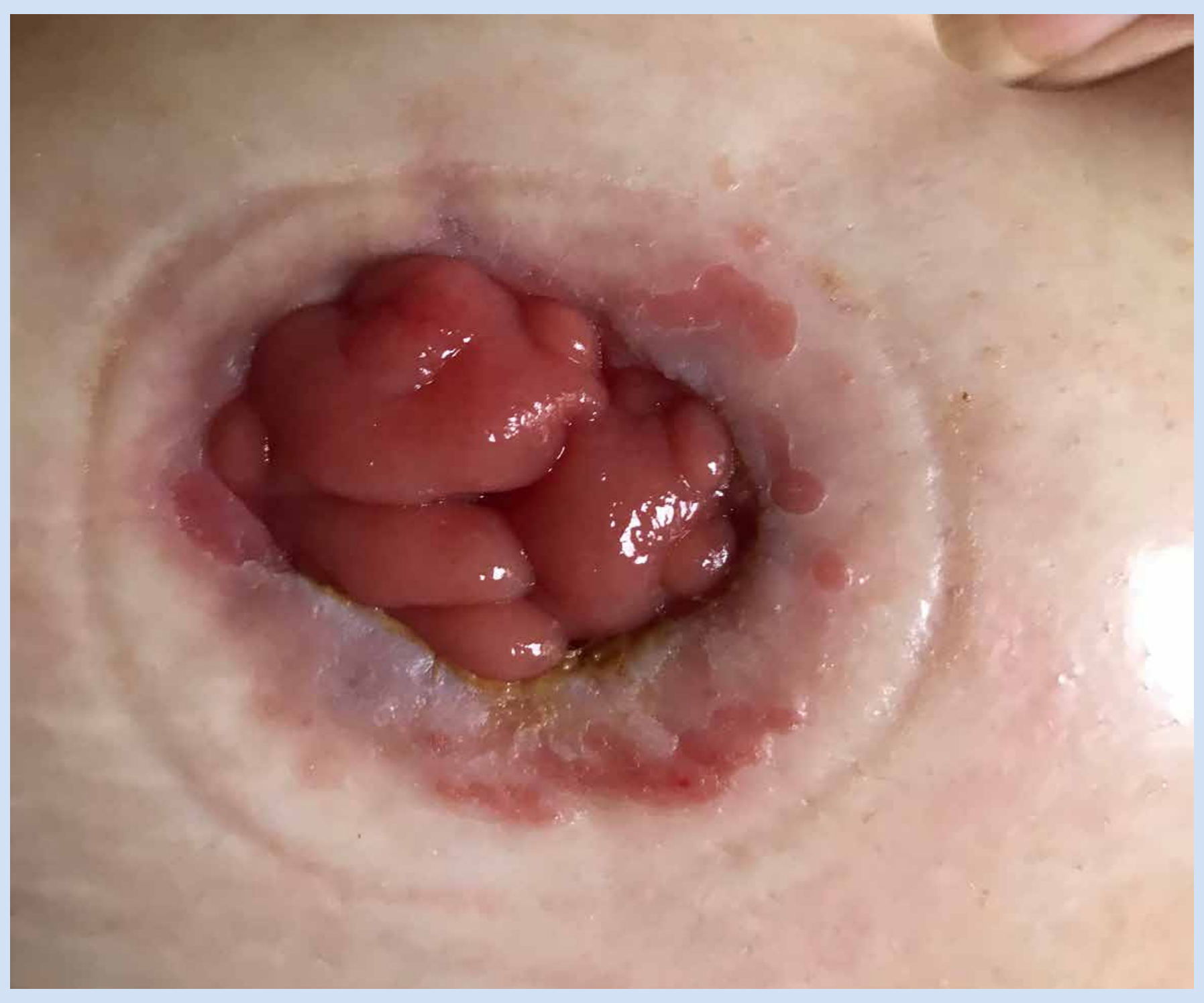
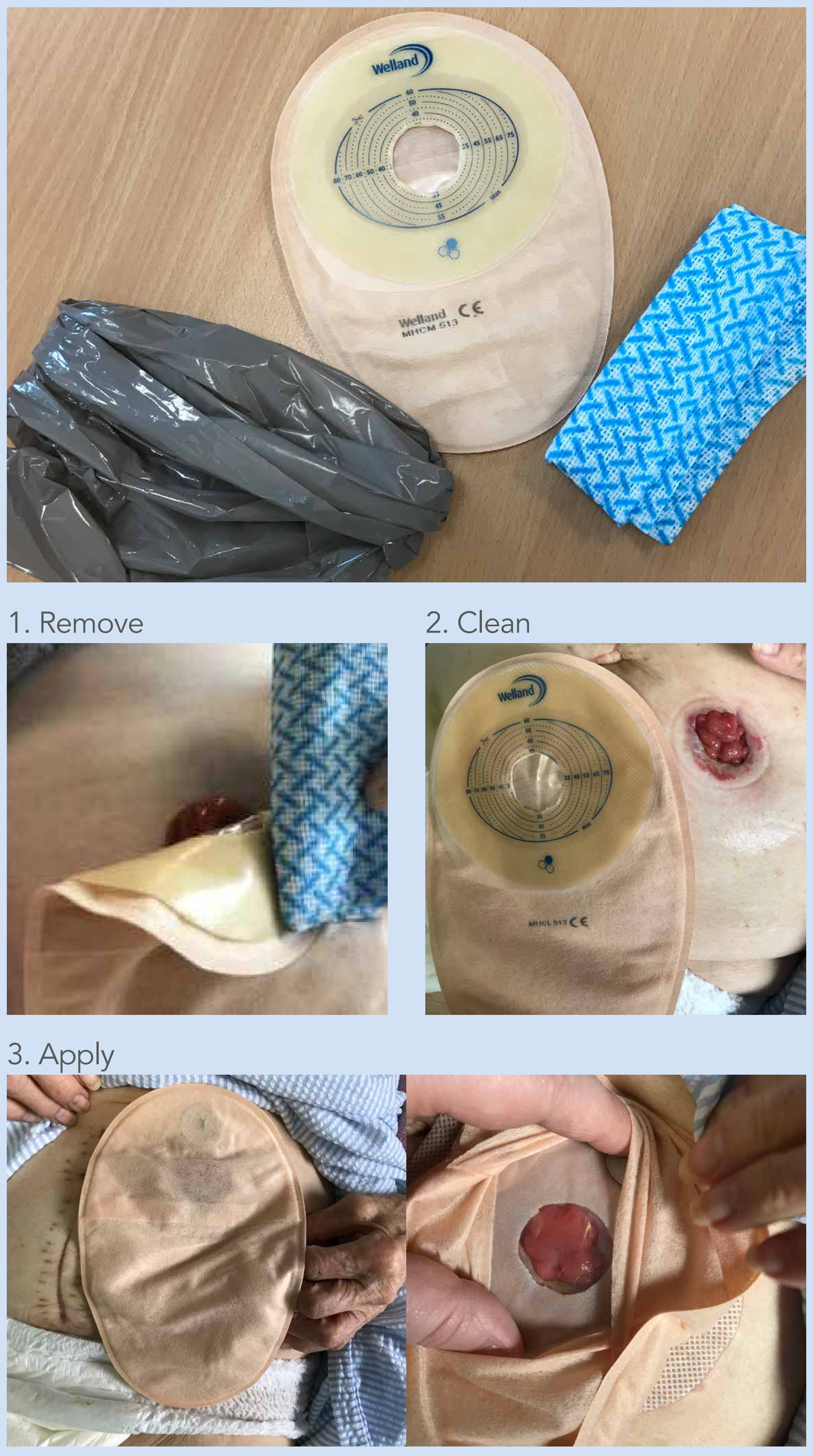


Figure 1.



Equipment

1. Remove

2. Clean

3. Apply

Figure 2.

Figure 3.

References

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2. World Health Organization, 2017. *Mental Health of Older Adults*. [Online] Available at: http://www.who.int/en/news-room/fact-sheets/detail/mental-health-of-older-adults [Accessed October 2018].
3. Australian Bureau of Statistics, 2018. *Australian Demographic Statistics*. [Online] Available at: https://www.abs.gov.au/ [Accessed March 2019].
4. Australian Bureau of Statistics, 2018. *Migration Australia 2016-2017*. [Online] Available at: https://www.abs.gov.au/ausstats/ [Accessed March 2019].

Diagnosis/Surgical History

20/6/18 – Emergency Hartmann's procedure for colonoscopic perforation followed by an extended stay in the acute setting.

5/7/18 – Transfered to subacute/rehabilitation for Stomal Therapy education, assessment and complex discharge planning.

Stoma Assessment: Colostomy measured 32mm, mucocutaneous junction healed, peristomal skin complications present related to contact with output.

Issues

Mrs. R explained that she had difficulty cutting the flange to the correct size and also trying to attach the bag to the flange. She was unable to visualise her colostomy without the use of a mirror and said she didn't have 'enough hands' to apply the flange correctly. These issues had caused her to cut the opening for the stoma to large which led to the circumferential damage (Figure 1). Therefore the main issues were language limitations, a 2 piece mechanical coupling, incorrect sizing of product, and difficulties with fine motor skills due to dexterity and sensation.

Plan

1. Change to a 1 piece product to simplify the process
2. Resizing to utilise a pre-cut product and as she was not able to read English well
3. Create a photo care plan (Figure 2); to refer to when changing her colostomy bag

The Aurum with Manuka Honey was chosen as the product came in the appropriate pre-cut size, would aid in healing the damaged peristomal skin and is easy to apply.

When educating Mrs. R it was important to reiterate that it is a 1, 2, 3 process. There are only three things to collect prior to changing:

1. New bag
2. Wet cloth
3. Rubbish bag

Then there are three steps:

1. Remove
2. Clean
3. Apply

Each step is demonstrated while only saying 1 as the bag is removed then say 2 while cleaning skin and stoma and finally 3 while applying the new bag.

Review

Mrs. R reported at the next review that it was much easier to change her appliance and liked having the photo careplan to refer to during appliance changes. Her peristomal skin had improved in the 3 days of using the Aurum with Manuka Honey (Figure 3) and Mrs. R also commented that she didn't feel "itchy" around her stoma. She was no longer requiring any assistance from nursing staff and was confident to be discharged home to resume caring for her husband. Mrs. R was discharged home with district nurse support.

Conclusion

The use of unnecessary products and numerous steps in the process of changing creates complicated and confusing tasks for the aged or limited English patient cohorts. Simplifying the process allows for all patients to be presented with the same education process and facilitates continuity of care as handover of the process for education is then also simplified. The 1, 2, 3 step education process requires only repetition and practise. Stomal Therapy Nurses provide hands on bedside education to all patients and by using this process can minimise the potential for variation and miscommunication from Stomal Therapy Nurse to bedside nurses.

Consent was obtained to use these images and case from the patient within the guidelines of the organisation.

Caulfield HOSPITAL

Feasibility of an upper limb implementation package for neurological rehabilitation: a pilot clustered longitudinal cohort study

Laura Jolliffe[1,2], Tammy Hoffmann[3], Leonid Churilov[4] and Natasha Lannin[1,2]

[1]Occupational Therapy, Alfred Health; [2]La Trobe University, Melbourne; [3]Bond University, Gold Coast; [4]Melbourne University, Melbourne

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Overview The aim of this study was to investigate the feasibility and effectiveness of providing implementation packages to occupational and physiotherapists to improve stroke guideline adherence. Adherence to recommendations (file audits), and outcomes in patients arm/hand being treated by participating therapists were measured before and after the 3-month intervention period. Therapists allocated to the high-resourced group adhered significantly more to recommendations and reported the intervention to be acceptable, time-feasible and improved their clinical skill. There was no difference in adherence between the lower-resourced group and the control group.

Background: Hand and arm activity after stroke and other brain injuries improves with evidence-based upper limb rehabilitation. However, therapists face known barriers when providing evidence-based rehabilitation and require support to implement clinical practice guidelines. The aim of this study is to investigate the feasibility and effectiveness of a high resourced and a low resourced implementation package, when compared to a control group.

Method: Using a non-randomised clustered longitudinal cohort design, occupational and physiotherapists were allocated to one of three groups: (a) facilitator-mediated implementation package (high-resourced), (b) self-directed implementation package (low-resourced), or (c) usual care (control); we recruited n=1 inpatient and n=1 outpatient site per group. Primary outcomes of feasibility (post intervention survey and focus groups) and adherence to guidelines (medical file audits), and secondary outcomes of upper limb outcomes (Box and Block Test, Fugl-Meyer Upper Extremity Assessment and weekly minutes of practice) were collected at baseline and after 3-months of intervention.

Intervention: Implementation packages of each group

Group A: Facilitator-mediated translation package (high-resourced)

- Fortnightly audit/feedback
- Interactive, regular education sessions
- Coaching and mentoring
- Tailored resources
- Equipment provision

Group B: Self-directed translation package (low resourced)

- Online (written) education
- Video demonstration of interventions
- Equipment provision
- Pre-planned treatment pathways

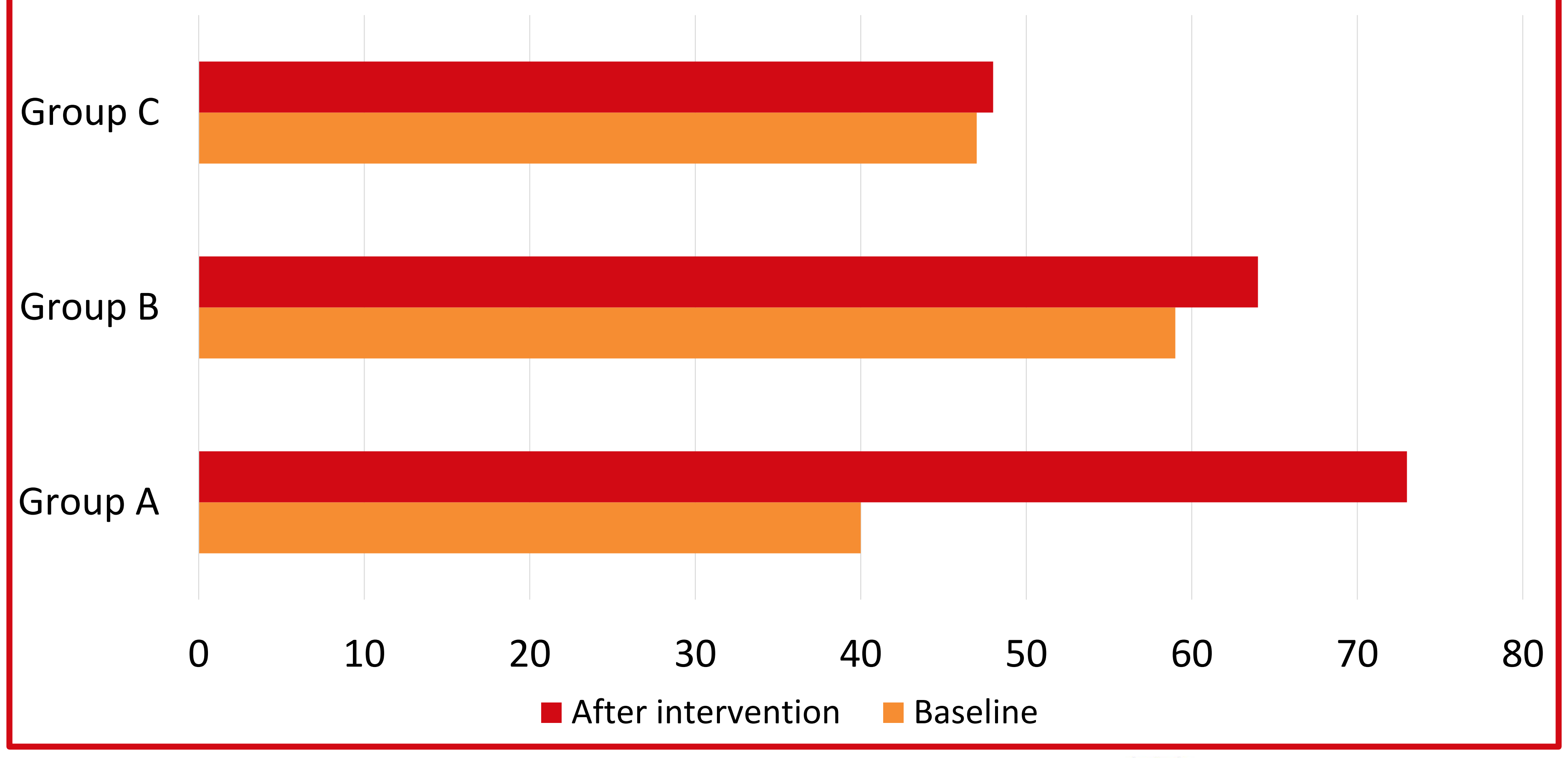
Group C: Usual care (control)

No additional support provided

Results: 29 therapists and 55 patients participated. Therapists in the facilitator-mediated group (A) demonstrated improved guideline adherence (28.6% improvement (95% CI 21%-36%)) and reported the intervention to be acceptable, time-feasible, and perceived it to improve their skill and confidence in upper limb rehabilitation. Therapists in the self-directed group (B) improved guideline adherence by 3% (95% CI -1-7) and requested more guidance for their implementation. There were no patient safety concerns in the facilitator-mediated group despite these patients increasing their weekly minutes of upper limb practice by up to 187 (95% CI -11-385) mins/week.

Implications: A facilitator-mediated implementation package was acceptable to clinicians working in stroke rehabilitation, and safe for the patients. Results suggest that a facilitator is an important contributor for successful implementation of research to practice, and that a low-resource investment is no more effective than usual care. An adequately powered study is planned to understand how to support clinicians to provide evidence-based upper limb rehabilitation after stroke.

Median adherence to guideline recommendations before and after intervention per group



- Provision of tailored and accessible resources was valuable
- Equipment and resource availability allowed timely best-practice intervention provision
- Skilled behaviour monitoring incentivised evidence based practice
- Direct mentorship and modelling prioritised and facilitated optimal learning
- Study participation increased therapist skills, knowledge and confidence

Figure 1: Feasibility themes generated from post-intervention focus groups of Group A participants.

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Does attending Geriatric Clinic consultations via telehealth from Aged Care Facilities enhance the patient experience?

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Introduction

Frail older adults living in Residential Aged Care Facilities (RACFs) frequently experience difficulties in attending face-to-face Geriatric Clinic appointments at Caulfield Hospital due to mobility, transport or health related issues.

In September 2018 the Caulfield Hospital Geriatric Clinic established a telehealth service to:

- Increase access to specialist Geriatrician services for frail older adults living in metropolitan RACFs.
- Improve the coordination of complex care for older people by increasing primary care engagement with Geriatricians
- Reduce the travel burden experienced by patients, their families and care providers

Aim

To examine the experience and benefits for patients living in metropolitan RACFs when attending Geriatric Clinic consultations via telehealth.

Methods

Geriatric Clinic patients living in RACFs attend initial Geriatrician face-to-face consultation at RACF or Caulfield Hospital

↓

Geriatrician identifies patient suitability to attend review consultations via telehealth & obtains consent

↓

RACF nursing staff provided with telehealth setup information

↓

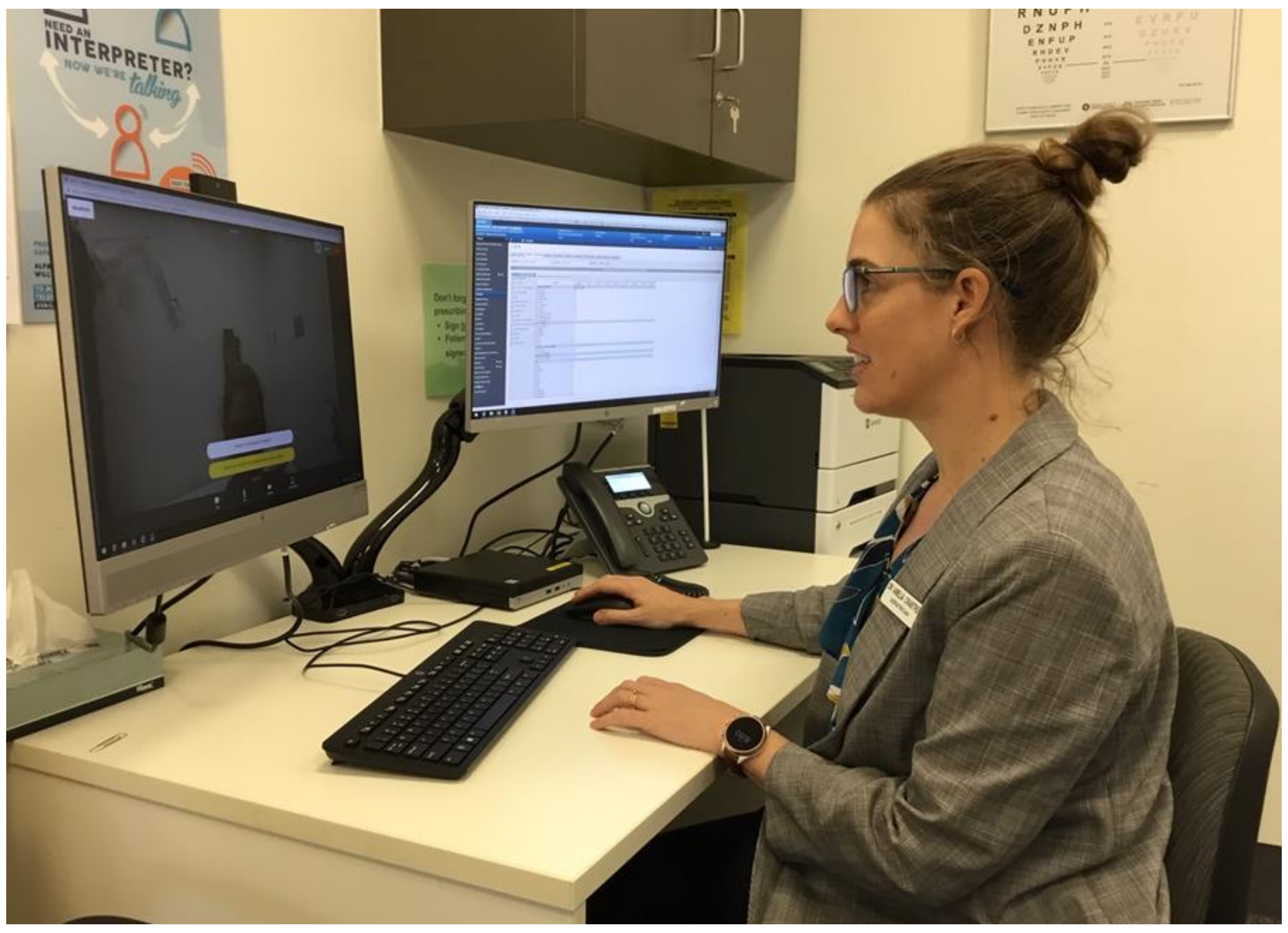
RACF nursing staff coordinates technology, family & GP attendance (depending on patient needs)

↓

Patient attends supported telehealth consultation from RACF (supported by RACF nursing staff/family/GP)

↓

Complete online patient experience and clinician satisfaction survey



Results

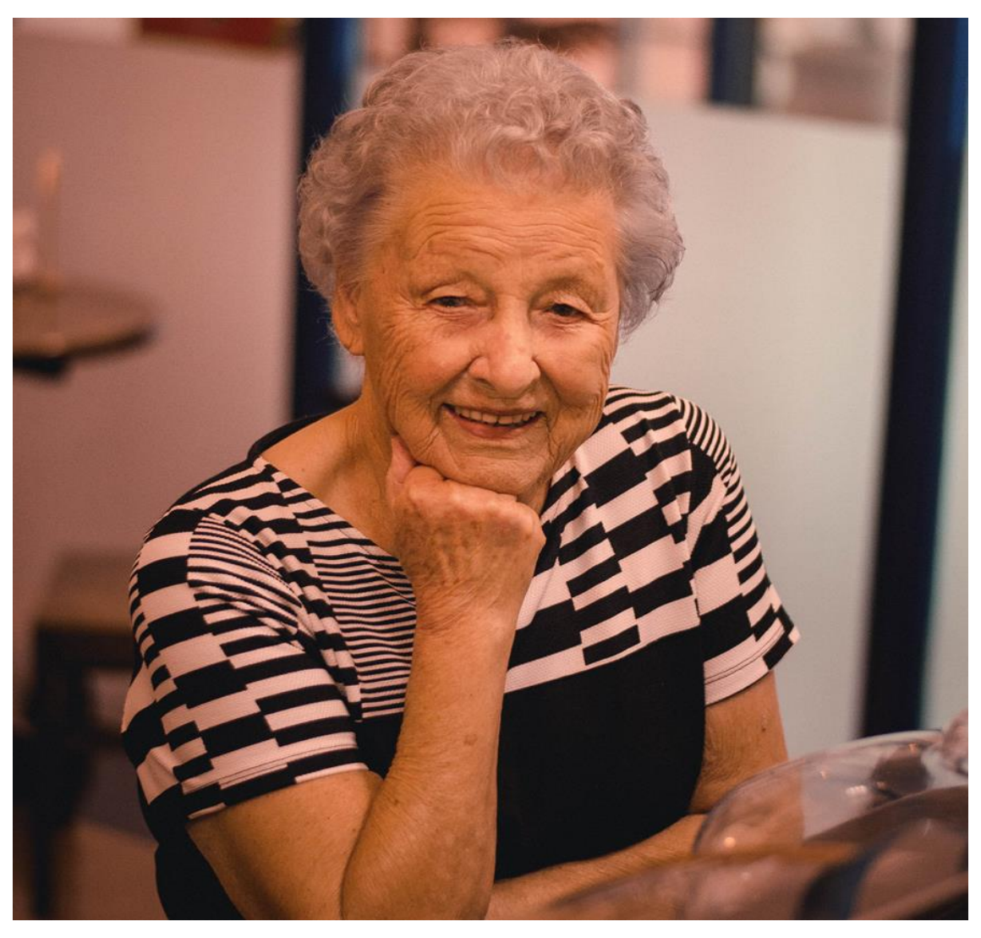
15 patients attended via telehealth
6 Geriatricians using telehealth
GPs participated in 40% of consultations

81% used telehealth to overcome travel and mobility issues
775km of travel distance saved

100% of patients satisfied with the standard of care
100% of patients would use telehealth again

Communication and collaboration between care providers
Timely implementation of specialist recommendations
Ongoing care provided locally by GPs and RACFs

Patient experience



"It is difficult going out being blind, its harrowing for me….having appointments via telehealth means I don't have to leave the facility"

Geriatrician experience

"The cognitively impaired patients coped better with telehealth than I originally expected"

"Supported telehealth consultations allow us to involve a wider net of the patients care team and recommended changes to their care can be made more quickly"

GP experience

"The technology is not a barrier, it is simple and effective"

" Through telehealth we can work more collaboratively with specialists and provide better care for our resident"

RACF experience

"It was an amazing telehealth session today, very productive and updated the family on the plan of action. We are looking forward to doing more telehealth"

Lessons

Key enablers driving telehealth activity:

- Clinical 'telehealth' champions
- Sharing the telehealth value proposition
- Set the expectations 'opt out' of telehealth rather than 'opt-in'
- RACF staff eager to support telehealth consultations
- Flexibility to see patients earlier and outside of usual clinic times

Conclusions

For frail older adults, attending Geriatric Clinic consultations via telehealth from RACFs has been an acceptable alternative and value-adding tool facilitating increased access to specialist care.

Telehealth has enhanced the patient experience by reducing travel burden while increasing communication and collaboration between Specialists, RACF staff and GPs.

Telehealth is a flexible, portable and scalable tool which can enhance the patient experience and increase community access to high quality health care across other Caulfield based programs and services.

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Making OHS Easy

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1.Service Development Project Officer, Carer Services, Caulfield Hospital, Alfred Health.
2. Office Manager, Carer Services, Caulfield Hospital Alfred Health.
3. Operations Manager, Carer Services, Caulfield Hospital, Alfred Health

What we aimed to do

This project was developed to streamline and centralise OHS compliance activities and develop a consistent, sustainable system throughout Carer Services across Caulfield, Dandenong and Frankston offices.

The problem

- Disparate OHS information stored across multiple locations
- A variety of methods in use to track compliance and run audits
- Staff concerned a change in work practice may mean information is lost

Actions taken

- Reviewed current systems for OHS compliance across all offices
- Conducted individual and team planning sessions
- Compiled staff feedback
- Used feedback to design a simple and easy system for keeping OHS records

As a result

- One consistent and sustainable OHS Audit schedule now used
- No hard copy checks needed
- Records saved in one folder for each financial year
- Eliminated uncertainty of compliance and now adhere to Alfred Health OHS
- Easy to see past, current and future activities
- Administration team now responsible for OHS audits
- Prompt and accurate reporting to senior management

Acknowledgements

We would like to thank Carer Services Administration team for their flexibility, positive attitude and ability to change.

More info?

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Systems Thinking, from theory to practice

Hannah Opeskin, Clint Wilkie, Laura Ayres
Population Health Team, Caulfield Community Health Service (CCHS), Alfred Health

Introduction

In 2017, Victorian Community Health Services were mandated to adopt systems thinking and place-based approaches in the delivery of health promotion. Caulfield Community Health Service's systems thinking journey has shifted from grappling with systems thinking theory, to action and practice.

Challenges:

- Translating systems theory into tangible health promotion practice.
- Engaging the multidisciplinary (health promotion and clinical staff) team, with varied expertise in complex systems theory.

What is systems thinking?

Systems thinking is the process of understanding complex issues using different perspectives and collaboration. Systems practices develop one's ability to better understand and make sense of complex situations. Systems thinking in a health promotion context involves less resource intensive, behaviour-change programs to a broader view about strategic and collaborative relationships and influencing health and wellbeing on a large scale.

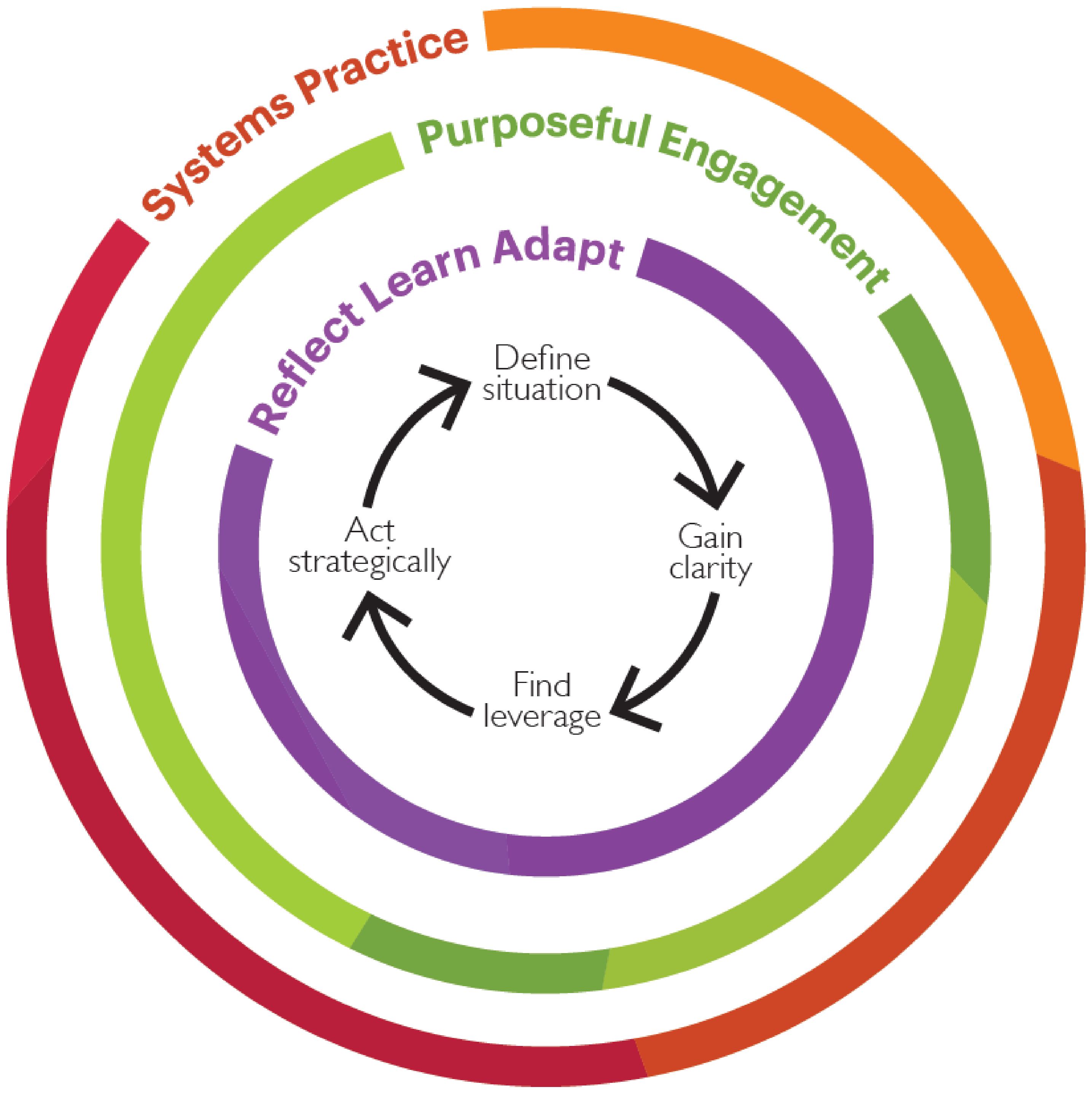
Process

- Creation of a shared understanding about 'placed-based/systems thinking approaches':

  What does this mean for our team, our work, and our local community?

- Adoption of a systems change framework from The Australian Partnership Prevention Centre (TAPPC).
- Minimised jargon.
- Incorporated 'everyday systems practices' into daily tasks.
- Regular reflection on mental models/work practices.
- Completion of a 'Systems Practice' course to ensure and reinforce the practical application of place-based systems thinking.

Figure 1. Systems Change Framework[1]



Results and outcomes

The decision to move from systems theory to practice involved simplifying our work into four categories outlined in the TAPPC Systems Change Framework (Figure 1) defining the situation, gaining clarity, finding leverage and acting strategically. These categories guided our transition; implementing practical approaches (Figure 2) led us through an in depth exploration of our community using a systems thinking lens.

- ✓ The local community and stakeholders have been engaged using group model building sessions to explore issues using place-based systems thinking principles.
- ✓ The health promotion team and clinical staff have increased their confidence to work across whole systems and using place-based approaches to drive systems change.

Group Model Building session with community members

Discussion

Moving from traditional health promotion practices and approaches to systems thinking practices was a new way of working for our staff. However, the benefits of using these approaches had been extensively researched and assured to be beneficial for the community. To ensure our team had capacity to work in this new way and was using shared language and terms, our team engaged in training with a practical component. Additionally, engaging staff in a shared understanding of systems thinking proved to yield the greatest results and developed a common agenda.

Figure 2. Systems Thinking practices[1]

Conclusion

Using systems thinking approaches and practices have helped increase our team's understanding of our community's health and wellbeing and facilitate large scale change. Adopting language and frameworks with minimal jargon in addition with the creation of a shared understanding was imperative for the learning of our team.

As the team's understanding of systems thinking increases, it is likely that the frameworks and language we use will also further develop.

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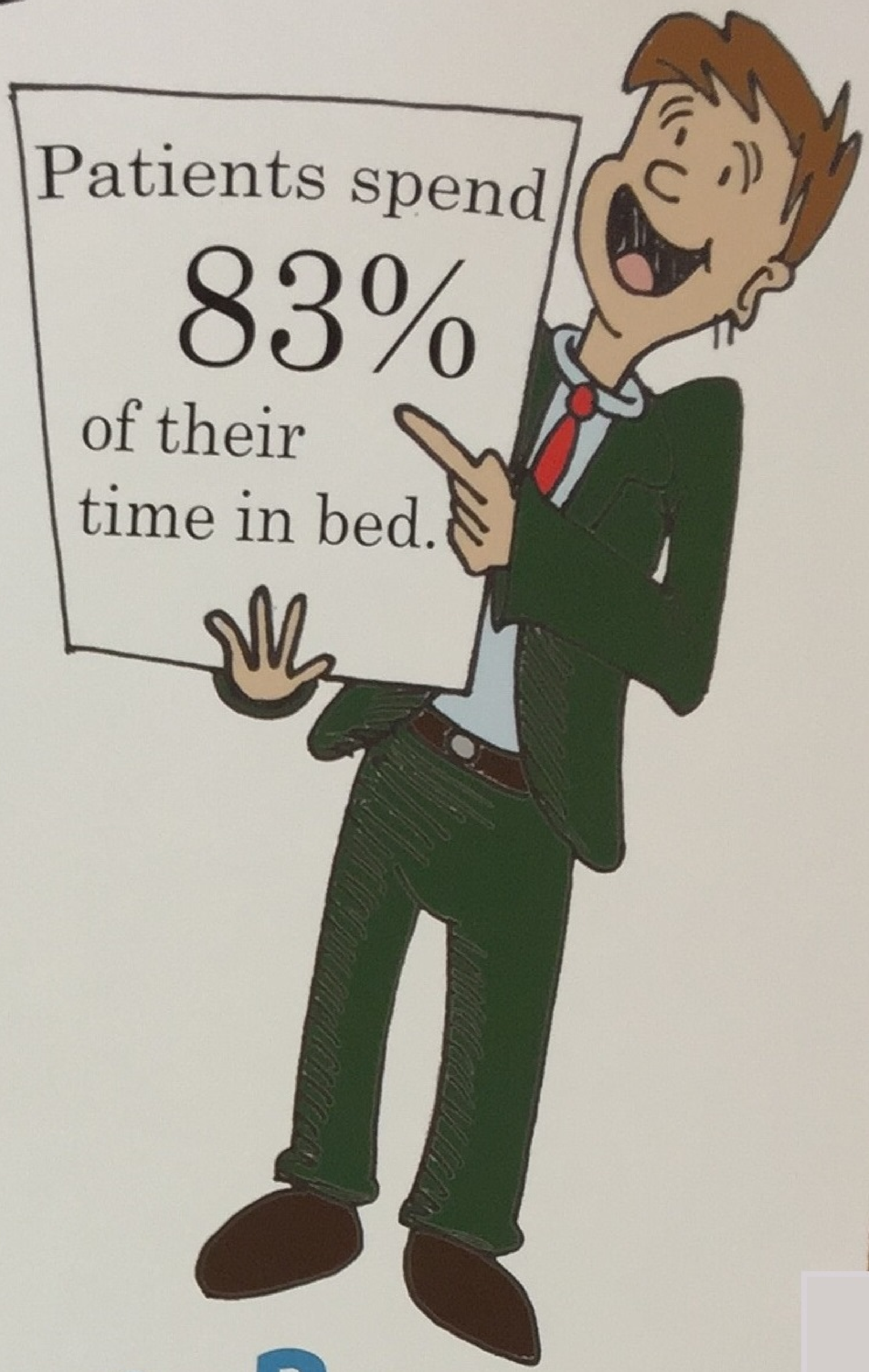
References

1. Davidson S and Morgan M. Systems Change Framework. Sax Institute, September 2018

GET DRESSED. GET MOVING. GET BETTER!

Petch, T[1,2]; Mahon, L[1,2], Ridzalovic, L[1,2];
Ekegren, C[2,3,4],Crabtree, A[1,2].
On behalf of the Get Dressed Working Group.



THE PROBLEM WITH STAYING IN BED:

REDUCED MOBILITY
loss of muscle strength
reduced endurance
loss of balance
FALLS

STAYING IN BED ALSO INCREASES:

- Urinary incontinence
- Constipation
- Confusion
- Pressure areas
- Infections
- Blood clots
- Low mood
- Malnutrition

BEING IN BED- IT'S NOT GOOD.

WHAT ARE WE TRYING TO DO ABOUT THIS PROBLEM?

Through our involvement in the Safer Care Victoria Collaborative, the Aged Care wards are working on improving the numbers of patients who are dressed, moving and out of bed for lunch everyday.

WHAT INTERVENTIONS HAVE WE BEGUN TESTING?

With the help of patients, carers, staff, and volunteers, we have begun to work through practical solutions to this problem on the wards, including:

- a clothing pop-up
- solutions to motivate mobility
- volunteer led activity & walking groups
- education packages for staff, patients and family

TODAY IS THE DAY!

EVERYONE CAN MAKE A DIFFERENCE

[1] Department of Rehabilitation & Aged Care,[2] Alfred Health,[3] Monash University, Department of Epidemiology & Preventive Health,[4] Burnet Institute.

Does an outpatient hip fracture clinic meet previously unmet care needs?

Hasanka Ratnayake[1], Brenton Tay[1], Brian Anthonisz [2], Amelia Crabtree[1], Chris Moran [1]
[1]Department of Aged Care, Alfred Health; [2] Department of Rehabilitation Medicine, Alfred Health

Background

Hip fracture is associated with multiple complex issues that often extend beyond a person's hospital stay.

Despite this, there is a lack of clarity around the best way to support these complex care needs post-discharge

Aim

We developed a multi-domain outpatient clinic to follow older people with hip fracture and aimed to describe the characteristics of users and issues identified in the first eight months of the service.

Methods

We performed a prospective observational cohort study of people attending a new multi-domain outpatient clinic.

Eligibility

- Minimal trauma hip fracture patients who were not discharged to a nursing home or Transition Care Program
- Age > 65 years

Measurements

Data from patient notes on pre-fracture, acute, sub-acute and post-discharge clinical and functional issues

The use of a standardized clinic template created in consultation with clinicians allowed data to be extracted in the following domains:

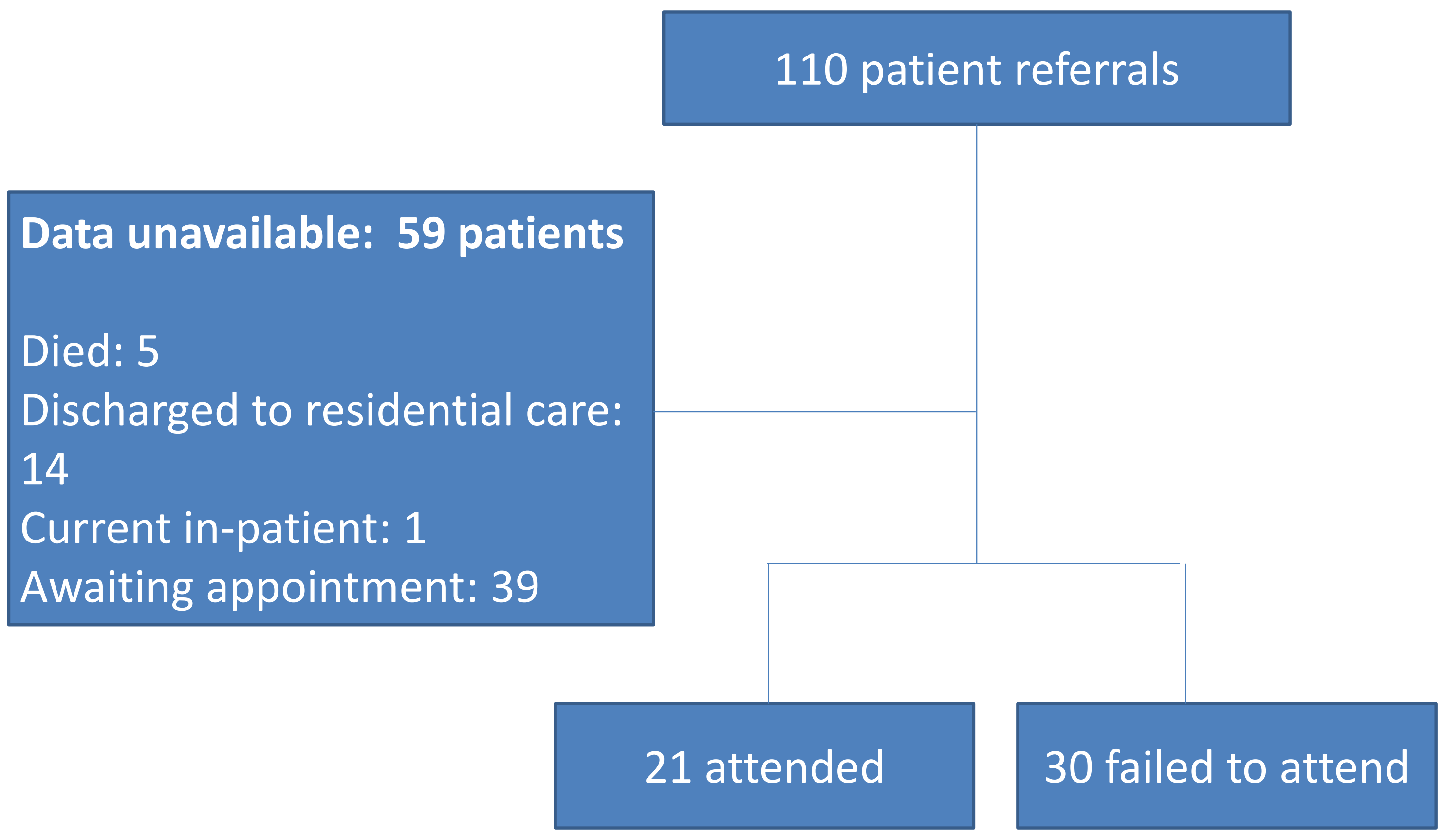
- Bone Health and Falls
- Cognition and Mood
- Continence
- Nutrition
- Patient Reported Outcome Measures and Carer Stress
- Medication review
- Advanced Care Planning/Power Of Attorney

Clinic template then formed the basis of issues-focussed communication to primary care providers.

Results:

A total of 39 were awaiting to be seen at the time of writing, 21 people attended the clinic and 30 did not.

Figure 1. Hip Fracture Clinic referrals



110 patient referrals

Data unavailable: 59 patients

Died: 5
Discharged to residential care: 14
Current in-patient: 1
Awaiting appointment: 39

21 attended

30 failed to attend

Those who attended the clinic compared to non-attendees were

- older (median age 80 years vs 77 years)
- had higher rates of post operative delirium (33% vs 3%)
- tended to require in-patient rehabilitation (90% vs 62%)
- spent a longer time in subacute care (median length of stay 25 days vs 22 days) **(Table 1)**

Table 1. Baseline characteristics of clinic referrals

	Clinic attendees	**Non-attendees**
	Median (IQR) or n/(%)	Median (IQR) or n/(%)
N	21	30
Age (Years)	80 (IQR 76- 85)	77 (IQR 69-84.5)
% Female	76%	50%
Diagnosis of OP prior to hip fracture	3 (14.3)	3 (10)
On anti-resorptive prior to hip fracture	1 (4.8)	2 (6.7)
Post op complications		
Delirium	7 (33.3)	1 (3.3)
Anaemia	5 (23.8)	5 (16.7)
Chest infection	1 (4.8)	0
Acute Hospital LOS (days)	5.9 (IQR 3-7)	7.3 (IQR 5-8)
Rehabilitation admission after hip fracture	19 (90.5)	19 (63.3)
Sub-acute aged care Rehabilitation	12 (57.1)	4 (13.3)
Rehabilitation LOS (days)	25 (IQR 18-30)	22 (IQR 11-31.5)
Prescribed new anti resorptive on discharge	9 (45)	4 (13.3)

Key: OP= Osteoporosis; LOS= Length of Stay;

Before clinic:

- 45% of patients had been commenced on anti-resorptive medication
- 38% had falls assessment documented on discharge
- 9% had Advance Care Planning completed
- 10% had DEXA scans ordered

After clinic **(Figure 2):**

- Further 63% of patients commenced on anti-resorptive medication
- Falls assessments documented for all and interventions in 47%
- DEXA scans ordered in a further 29%
- Further 52% referred for ACP completion

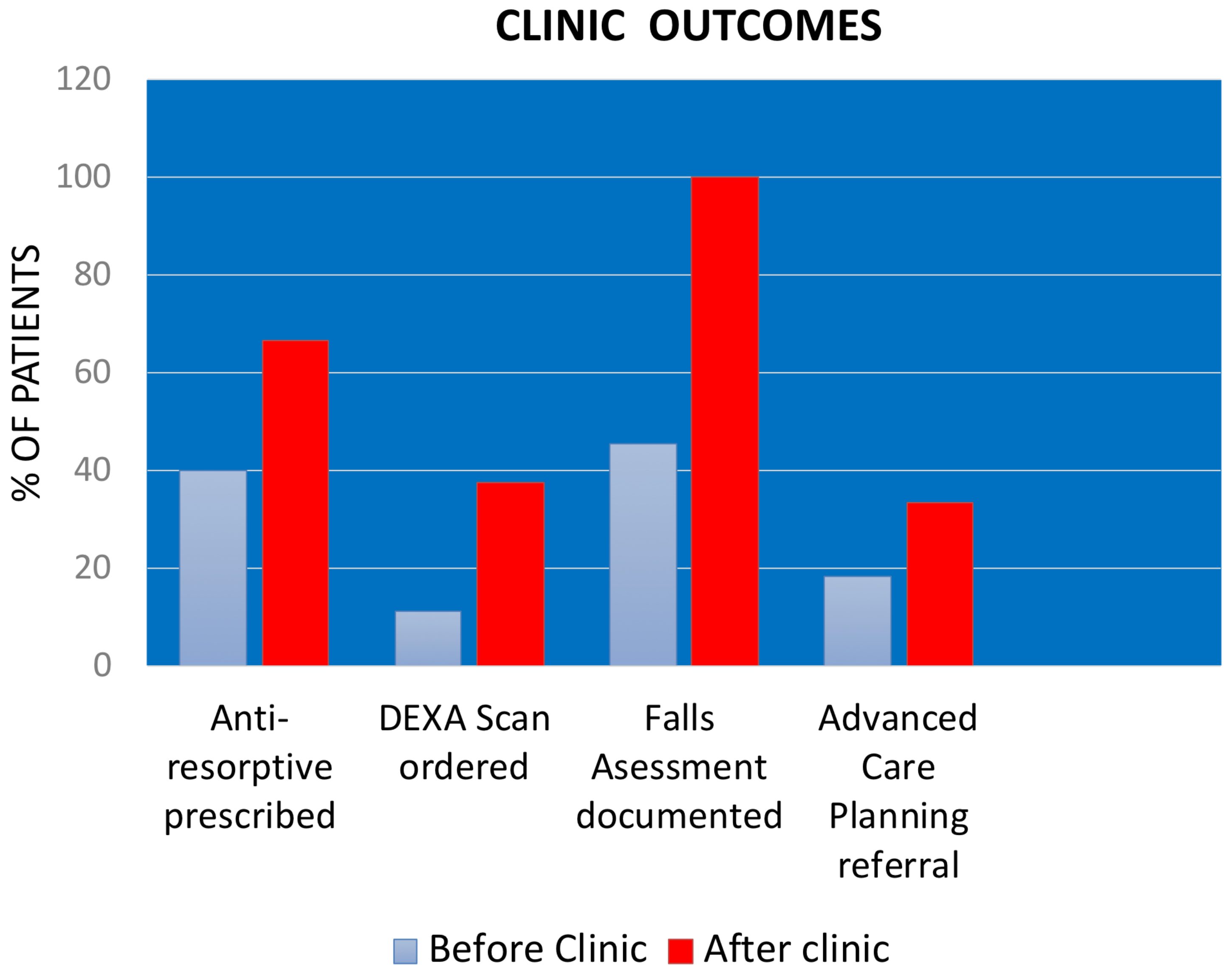


Figure 2: Clinic outcomes in anti-resorptive prescription, Dual energy x-ray absorptiometry (DEXA) Scan ordering, falls assessment documentation and advanced care planning referrals.

Conclusions

Even patients with minimal trauma hip fracture who have had recent admissions to rehabilitation wards, a post discharge clinic identified and addressed gaps in care and follow up.
Over half of eligible patients failed to attend the clinic. These patients were a more robust cohort who may have felt they had less to gain from follow up. However, further analysis into reasons they failed to attend is warranted.

Further research is also needed to ascertain whether this follow up service will translate into improved clinical outcomes and patient satisfaction after hip fracture.

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'Setting the bar' – Establishing Australian & New Zealand benchmarks to improve services and outcomes for people with chronic pain

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§Australian Health Services Research Institute, University of Wollongong, Australia †Dept. Anaesthesia & Perioperative Medicine, Monash University, Melbourne, Australia

INTRODUCTION

The electronic Persistent Pain Outcomes Collaboration (ePPOC) aims to improve services and outcomes for people experiencing chronic pain[1]. Over 60 pain services across Australia and New Zealand have collected standardised outcome measures from over 50,000 patients. In 2016, eight outcome and quality benchmarks were established and implemented.

METHODS

The development of the benchmarks involved extensive consultation and agreement from participating pain services and major stakeholders. Seven clinical and one process benchmark together seek to facilitate quality improvement and collaboration to improve outcomes for patients.

The criteria for choosing the benchmarks were:

- the domain must be clinically relevant
- there is evidence that the domain is amenable to intervention
- the benchmark thresholds reflect good rather than average practice
- the benchmarks apply to all services regardless of role delineation or funding source
- benchmark calculations include patients whose baseline scores were of at least moderate severity
- each benchmark reports the proportion of patients who made clinically significant improvement (CSI)

RESULTS

The eight benchmarks and their criteria

Pain *(using the Brief Pain Inventory)*

- 30% of patients with moderate or worse **average pain** at referral made CSI at treatment end
- 50% of patients with moderate or worse **pain interference** at referral made CSI at treatment end

Depression, Anxiety and Stress *(using the DASS21)*

- 60% of patients with moderate or worse **depression** at referral made CSI at treatment end
- 50% of patients with moderate or worse **anxiety** at referral made CSI at treatment end
- 60% of patients with moderate or worse **stress** at referral made CSI at treatment end

Pain catastrophising
(using the Pain Catastrophizing Scale)

- 60% of patients with high or severe pain catastrophising at referral made CSI at treatment end

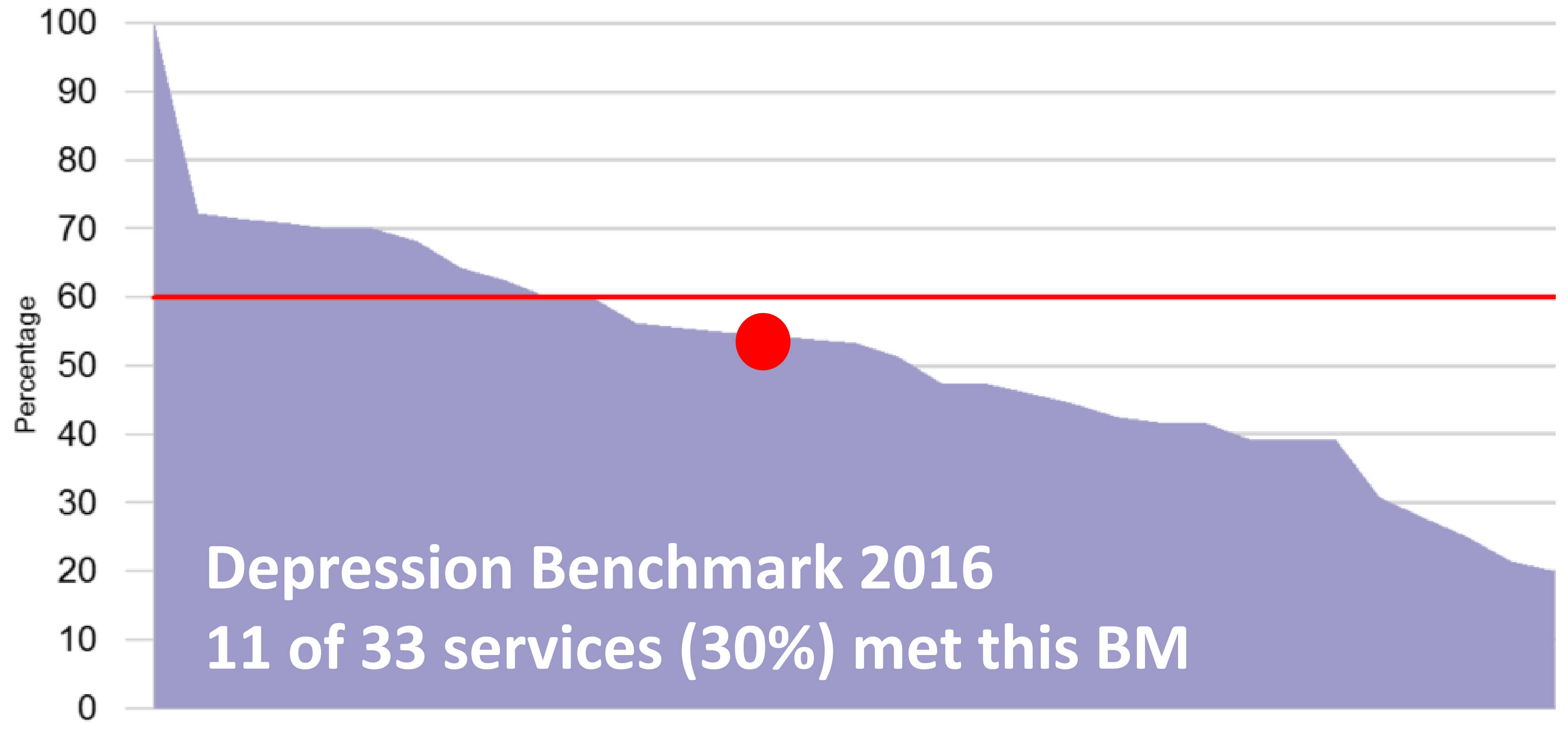
Pain self-efficacy
(using the Pain Self-Efficacy Questionnaire

- 60% patients with impaired self-efficacy (moderate or worse) at referral made CSI at treatment end

Waiting time

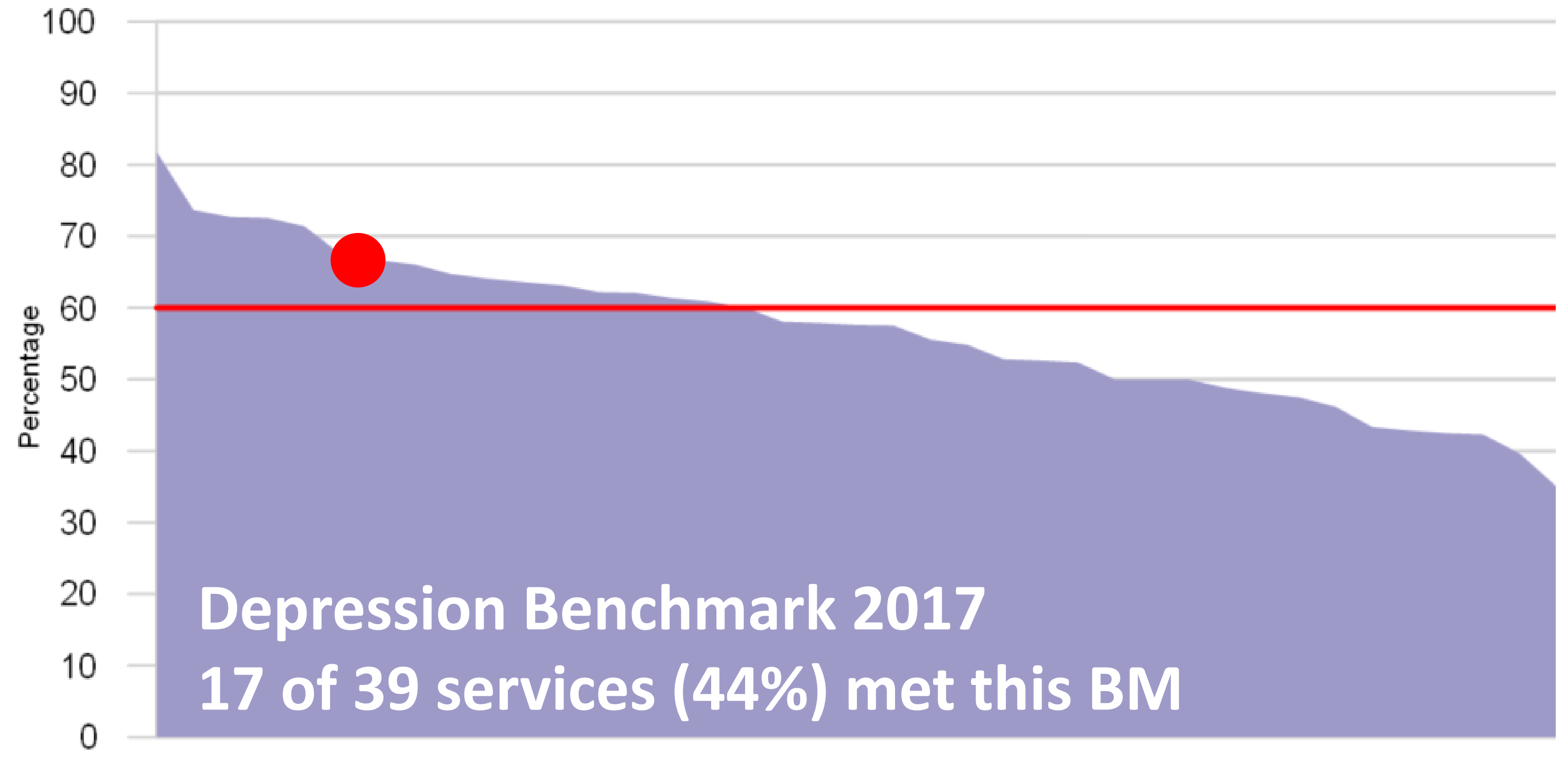
- 80% care episodes start within 3 months of the referral being received

Benchmarks are reported in table and graph form, the graphs show the benchmark (red line), all services data (purple area) and on individual pain service reports, a red dot marks their current position on the benchmark.



Setting the bar high…

The benchmarks are aspirational, set so that around 30% of services meet them. Since establishment, a gradual shift towards all benchmarks is evident, indicating reduced variation and overall improvement in patient outcomes.



CONCLUSIONS

These benchmarks provide a means of improving the quality of patient care and outcomes within Australian and New Zealand specialist pain services. Since establishment, a steady shift towards benchmark thresholds has been observed. Benchmarking workshops are held yearly with clinicians from specialist pain services and major stakeholder organisations learning from others and sharing ideas.

FUTURE DIRECTIONS

Benchmarking is a dynamic process, and we continue to monitor performance on the current benchmarks and raise the thresholds where possible. New benchmarks are also being developed, with an additional benchmark ratified in 2017. This new benchmark aims to address opioid use in patients, aiming for at least a 50% reduction in oral morphine equivalent daily dose in at least 50% of patients.

Reference:

1. Tardif et al, Establishment of the Australasian Electronic Persistent Pain Outcomes Collaboration.
Pain Medicine 2016; 0: 1–12

ePPOC Website