

**NOTICE OF LODGMENT**  
**AUSTRALIAN COMPETITION TRIBUNAL**

This document was lodged electronically in the AUSTRALIAN COMPETITION TRIBUNAL and has been accepted for lodgment pursuant to the Practice Direction dated 3 April 2019. Filing details follow and important additional information about these are set out below.

**Lodgment and Details**

Document Lodged: Statement

File Number: ACT 5 of 2021

File Title: RMSANZ APPLICATION FOR REVIEW OF AUTHORISATION  
AA1000542 DETERMINATION MADE ON 21 SEPTEMBER 2021

Registry: VICTORIA – AUSTRALIAN COMPETITION TRIBUNAL



REGISTRAR

Dated: 16/05/2022 3:04 PM

**Important information**

This Notice has been inserted as the first page of the document which has been accepted for electronic filing. It is now taken to be part of that document for the purposes of the proceeding in the Tribunal and contains important information for all parties to that proceeding. It must be included in the document served on each of those parties.



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Lodgement and Details

Document Lodged: Statement of John Estell, Member of Rehabilitation Medicine Society of Australia and New Zealand.  
Director of the Department of Rehabilitation Medicine and Medical Lead for the Aged and Extended Care Service Line at St George Hospital Kogarah, Sydney.

File Number: Act 5 of 2021

File Title: Application for review of Authorisation Determination made on 21 September 2021

Registry: VICTORIA – AUSTRALIAN COMPETITION TRIBUNAL

Dated: Monday 16 May, 2022

## Statement

No: ACT 5 of 2021

IN THE AUSTRALIAN COMPETITION TRIBUNAL

Re: Application for review of Authorisation Determination made on 21 September 2021

Applicant: Rehabilitation Medicine Society of Australia and New Zealand

Statement of: Dr John Estell, Member of Rehabilitation Medicine Society of Australia and New Zealand.

Address: Suite 103, 3-5 West St, North Sydney, NSW, Australia

Occupation: Director of the Department of Rehabilitation Medicine and Medical Lead for the Aged and Extended Care Service Line at St George Hospital Kogarah, Sydney.

I, John Joseph Estell, say as follows:

1. I am a practicing Rehabilitation Physician and the Director of the Department of Rehabilitation Medicine and Medical Lead for the Aged and Extended Care Service Line at St George Hospital Kogarah, Sydney.
2. I make this statement on my own behalf, in support of the application for review brought by the Rehabilitation Medicine Society of Australia and New Zealand Ltd.
3. Except where otherwise stated, I make this statement from my own knowledge.

### **Professional background**

4. I am a Board Member of the South East Sydney Local Health District, an Executive Member and the immediate Past Medical Co-Chair of Agency of Clinical Innovation Rehabilitation Network, and an Executive Member of the COVID Community of Practice for NSW Health.
5. I have worked in both the public and the private Health sectors for more than 30 years.
6. I hold a Fellowship of the Faculty of Rehabilitation Medicine (RACP) (2002) and a Masters in Sports Medicine (UNSW) (1998).

7. I am the Director of Rehabilitation Medicine at Waratah Private Hospital and have worked in a variety of Private Hospitals as well as running a company providing specialists in Rehabilitation Medicine to Private Hospitals (Rehabilitation Medicine Associates Pty Ltd).
8. I am an active member of the Private Practice Special Interest Group of the Rehabilitation Medicine Society of Australia and New Zealand (**RMSANZ**)
9. I was on the working party for the Royal Australasian College of Physicians' Australasian Faculty of Rehabilitation Medicine that established Standards for Rehabilitation Medicine in Inpatient Units (2018) and other forms of Ambulatory Rehabilitation (2014).<sup>1</sup>
10. I currently manage 15 – 20 patients at Waratah Private Hospital for a variety of conditions, including inpatient rehabilitation following joint replacement.
11. I am the Medical Lead for the Departments of Rehabilitation Medicine, General Medicine and Geriatrics at St George Hospital. I am the Director of the Rehabilitation and Aged Care Service at Calvary Hospital Kogarah.
12. I have oversight of Hospital based and Community based rehabilitation including services delivered through the Commonwealth Government's TACP packages (Rehabilitation in the Home for those over 65years of age) in the home at both sites.
13. From the period between 2018 and 2021, I was the Chairman of the Australasian Rehabilitation Outcomes Centre (Management Advisory Group) at the University of Wollongong, which collects de-identified data on all episodes of rehabilitation (both inpatient and ambulatory) throughout Australia and New Zealand.
14. I have held a number of leadership roles with NSW Health in Rehabilitation Medicine and have been instrumental in developing and operationalising models of care for NSW Health including In-Reach, Ambulatory and Rehabilitation in the Home for the 2009-2014 COAG agreement to enhance subacute services.
15. In my experience, approximately 10-13% of inpatient beds in NSW are dedicated subacute beds of which almost 70% are rehabilitation beds.
16. I have worked at stand-alone Rehabilitation Hospitals in both the public and private sector and have established and led Rehabilitation Medicine Departments at public and private hospitals including; St Luke's Private Hospital, St George Hospital, Sydney Private Hospital, Holroyd Private Hospital, Calvary Hospital where I have received referrals from specialists and general practitioners to admit patients for inpatient rehabilitation.
17. I have also coordinated the management of patients in the ambulatory setting through Day Hospitals at Sydney Private Hospital, Waratah Private Hospital, Calvary Hospital and St George Hospital.

18. I have work closely with orthopaedic surgeons, having had extensive experience in Trauma, Sports Medicine and Rehabilitation Medicine and have managed all case types, including post joint replacement and post-trauma rehabilitation.
19. In 2009, I was involved in a specific funding arrangement through the Council of Australian Governments National Partnership Agreement on Hospital and Health Workforce Reform (NPA-HHRWR), in which together with St Vincent's Hospital and Prince of Wales Hospital in Sydney, a Rehabilitation in the Home (RITH) program was developed.
20. The outcomes generated by this program were reported at the Annual Scientific Meeting of the Faculty of Rehabilitation Medicine in 2013 in Sydney (See Appendix A). This research demonstrated the complexity of models of care, communication frameworks and coordination systems required to manage patients including those with joint replacement in their homes., Further it delineated the medical issues treated and identified during the rehab in the home episode of care, the patient satisfaction with the medical oversight and the overall safety, efficiency and impact on hospital capacity of a rehabilitation physician directed model of care, for rehab in the home.
21. I have also assisted in the development of the Care Settings for Rehabilitation in the Model of Care documents produced by the Rehabilitation Medicine Network of the ACI of NSW Health which includes rehabilitation in the home<sup>2</sup> and the principles to support that model of care.<sup>3</sup>
22. Both of the documents referred to above are based on research evidence and support the conclusion that patient selection, overall governance, medical supervision and coordination by a Rehabilitation Physician are central to the appropriateness and success of any program for rehabilitation in the home care.
23. The standards in ambulatory rehabilitation published by the Australasian Faculty of Rehabilitation Medicine represent a basic standard for patient safety and the effective delivery of a rehabilitation in the home service. To my knowledge, there is no other accepted standard for rehabilitation in the home.

### **Private practice**

24. In my experience, the rehabilitation physician assesses the patient to determine whether rehabilitation is suitable, and indicated. Then, together with the patient, the rehabilitation physician makes a determination of the setting for the rehabilitation: in other words, where the rehabilitation will take place (i.e. in a residential setting or within a private hospital – either as an inpatient or as a day patient – or other facility).
25. In the event that the rehabilitation is to occur in a private hospital (whether as an inpatient or a day patient), the accepting hospital undertakes a fund check to ensure that the patient has adequate insurance cover to be managed at the agreed setting. Rehabilitation

Physicians are then regularly asked to fill in a patient specific rehabilitation plan that is submitted to the patient's private health insurer (PHI) to provide data, to determine goals and approximate length of stay and to clarify the setting.

26. In my experience, PHIs have negotiated contracts with the hospitals that I have worked at, which determine the settings that are available and the case mix which is acceptable.

27. In some hospitals that I work at, the contract that the hospital has with one or other of the PHIs (including HCF) disallows referral from the physician's rooms for inpatient rehabilitation and only permits admissions from an acute inpatient hospital. In practice, this means that many patient who have had a high risk of falls in the community or indeed have fractured bones or suffered lacerations from falls are no able to access an inpatient episode of care to offer intensive rehabilitation, which has been shown to prevent falls. In my experience, some of these patients end up suffering more serious falls resulting in fractured hips, which is a life threatening condition. It is only once this occurs that they have access to inpatient rehab despite rehab physicians identifying their needs earlier.

28. In these situations, I have to refer the patient to the public sector, where the patient can be added to a waiting list so they can be treated as an inpatient, in some circumstances. While the patient is at liberty to change health funds, in my experience many lack the health literacy to be confident about that route of action.

### **No opportunity to refuse to accept a contract from a PHI**

29. As a rehabilitation physician, I am unaware of each patient's PHI until after they have been seen in my rooms, or after they have been admitted into the hospital and treated by the relevant primary specialist (e.g. neurologist, orthopaedic surgeon) and I have assessed them for rehabilitation. As such, I have signed no gap pay contracts with all the health funds including those represented by the buying group AHSA. This decision is made by the hospital and primary specialist.

30. I have a commercial imperative to be able to be remunerated by all PHIs for inpatient episodes of care, so that I am able to claim a no gap fee and avoid my patients being exposed to out of pocket expenses. These arrangements allow me to minimise administrative costs as I do not have to issue accounts to patients or follow up late payments etc. As a result of the time at which I first consult the patient (described above) and this commercial imperative, it is necessary for me to have no gap arrangements with all PHIs.

### **The MPPA**

31. Should a PHI offer an MPPA with enhanced funding for services, as an alternative to the current no gap agreements, I consider it likely that I, as well as most of my colleagues, would feel compelled to consider signing up for the enhanced commercial arrangements associated

with the MPPA. Without signing up to the MPPA, there would be a risk of not being promoted as preferred providers by the PHI.

32. Further, in my opinion, those rehabilitation medicine specialists who objected to the terms of the MPPA and sought to adhere to the current no gap arrangement (in lieu of MPPAs) would be at risk of the PHIs' strategically pricing the reimbursements under the no gap contracts to an amount similar to the scheduled fee. This would mean that the rehabilitation physicians, in order to maintain their incomes, would need to engage administrative support to request out of pocket expenses from the patients – or effectively be compelled to enter into the MPPA, against their better clinical judgement.

33. In my experience, I have come across specialists with a limited referral base (due to their lack of seniority, referral network connections or developing clinical experience, particularly those commencing a career), for whom the pressures to receive enhanced contracted benefits may influence their moral and ethical standards when weighing up the benefits of independent rather than financial incentivised, clinical decision-making.

34. Trained rehabilitation physicians would be likely to be faced by a conflict of commercial incentives to refer the vast percentage of all patients for in-home rehabilitation (following joint replacement), as against the appropriate clinical course of selecting an appropriate rehabilitation setting based on clinical and psychosocial aspects of the patient's history and examination.

35. I consider that the proposed MPPA raises further issues relating to the ethics of consent and transparency. This is so as the signing specialists would be unable, through commercial in confidence aspects of the contract, to advise patients that they have been financially advantaged in the MPPAs to make the referrals for in-home rehabilitation.

36. In my opinion, a minority would not sign, others may sign and not adhere to the contractual requirements (leading to conflict with regulators) and others may sign and change their practices.

37. In its proposed form, and without details around the specific recording and treatment of patient data, the MPPA presents the potential for the "gaming" of data contractually required to be supplied to the PHI. That is, the insurer and the contractors may have differing definitions for certain conduct (or stricter or looser definitions) such that they may score data fields in their favour.

38. The risks of such gaming – and its likelihood – are evidenced by the approach taken by many public hospitals in NSW, as part of their data reporting in the context of NSW Health's approach to Activity Based Funding (ABF).

39. Under the ABF regime, patients with higher comorbidities (chronic illnesses) are considered more complicated to treat and are funded at a higher rate. Also patient who surpass

the average length of stay in acute hospitals and have a longer length of stay are considered by the funder as being treated in an inefficient manner. The funder will then decrease (step-down) the amount of funds paid to the hospital for every extra day above the cut-off point (2 standard deviations above the average length of stay for the same diagnostic related group (DRG)) until they reach an even longer admission date after which no funds will be offered for the remainder of the admission at all and the hospital will be liable for all costs. There are so many rules and regulations with activity based funding that courses are run by the state departments of health to familiarise coders and clinicians in its operations, nuances and ways of maximising their funding.<sup>4</sup>

40. However, many public hospital departments report data to State departments of Health in a nuanced manner, so as to maximise funding to the hospitals. For example, it is my experience that public hospital administrators utilise comorbidity listing, complication coding and type changing arrangements in order to maximise funding from the state and federal government.

41. I am aware of a variety of such practices. For example in order to obtain maximum fees from the funder for activity based funding, hospitals will trawl blood results to identify those with abnormal kidney function (this may occur routinely through dehydration before or after surgery or trauma or illness). Once identified it allows the hospital to claim an extra comorbidity entitle (acute kidney injury), which will increase the case payment coming to the hospital for its activity. In addition, activity based funds are predicated on length of stay and lower funds are provided for long lengths of stay. In the in the event, that a patient approaches the “cut point” (a number of admitted days after which the funder reduces their overall fee), the hospital will “type change them” to a subacute episode of care (rehabilitation, palliative care, mental health or geriatric evaluation and management) and potentially change the consultant in charge of their care, leaving the patient in the acute bed, so that they will not lose their funding for the prolonged acute length of stay.

42. NSW Health actually runs education sessions to ensure that coders and clinicians are aware of the funding processes that lead to maximum returns. This is simply one example of how data can be used to pursue commercial, rather than clinical, outcomes.

43. The template MPPA refers to orthopaedic surgeons signing targets to minimise inpatient rehabilitation and to take on responsibility for post-surgical care. In my experience, there are a number of clinical rehabilitation physicians and academic groups researching and developing rehab in the home services for stroke following acute neurological care, brain injury following neurosurgical care, arthritis/myopathy following acute rheumatologically care, deconditioning following acute geriatric care and lung disease following acute respiratory medical care. In the event that the ACCC allows nib/HH to proceed with MPPAs with targets and incentives to promote medically unsupervised rehabilitation in the home, a precedent will be set for other companies and funders to follow. The precedent will encourage other speciality groups to be targeted such as neurologists, rheumatologists, geriatricians, general physicians, neurosurgeons, trauma surgeons etc.



## **Scope of Practice and post-operative recovery with exercise following joint replacement**

44. All specialists have the right to treat patients as they see fit and within their scope of practice. This includes not referring the patient for rehabilitation assessment by a rehabilitation physician. In my experience, some orthopaedic surgeons choose not to refer patients for complex rehabilitation, and to rather manage patients' post-surgical recovery using physiotherapy services and, on occasion, their practice nurses.

45. The RMSANZ has published two documents relating to this practice following joint replacements and have used the term basic ambulatory rehabilitation to refer to post-surgical recovery with exercise managed by orthopaedic surgeons.<sup>5</sup> These reports identify that the selection of patients for rehabilitation in the home (RITH) need to be based, not just on joint range of movement post operatively, but on psychosocial factors like culture, mental health, family violence or carer strain, as well as environmental factors such as stairs in the home, showering set up (shower over bath being difficult to negotiate after a joint replacement), unruly pets, access to the toilet etc. Further, patient choice is important to canvas post operatively as many with lower levels of health literacy are surprised by how infirmed they have become postoperatively and the impact of post-operative pain. Further the documents shows an algorithm that identifies those patient that have no need for inpatient rehabilitation and can be managed by the surgeon as part of a post-surgical recovery with exercise in the home and does not represent a new episode of rehabilitation care.

46. For many surgeons for whom RITH is not part of their training curriculum, developing rehabilitation plans, coordinating teams of allied health, collecting rehabilitation specific outcome measures, medically managing comorbidities during rehabilitation and completing appropriate documentation to support a rehabilitation in the home model of care, may represent an out of scope activity.

47. I have regularly been referred patients from GPs or specialists who have required clinical review while undertaking a non-medically supervised therapy in the home program following a joint replacement. On occasions, I have had to admit them to either the public or private hospitals that I attend in order to offer them adequate rehabilitation services.

48. In my experience when general practitioners are called to assist a patient, by family, nurses or allied health during therapy in the home programs, they are at liberty to charge the patient out of pocket expenses which are not be covered under the terms of the contract. These include the additional costs of home visits or telehealth consultations out of hours.

49. I understand that Medicare Benefit Schedule (MBS) item numbers relating to payment from the MBS for community case conferences (item 820) are restricted to a limited number of medical specialities (rehabilitation physicians and consultant physicians). These case conferences are used in the management of patients in the community when being attended to

by medically led allied health teams. Rehabilitation Physicians regularly use these items in the management of patients undergoing ambulatory rehabilitation including Rehabilitation in the home. They are not available to surgeons, anaesthetists, pathologists, obstetricians, radiologists and separate item numbers are available for psychiatrists.

### **Safety of medically unsupervised therapy in the home programs**

50. NIB/HH do not indicate who will medically supervise patients while undertaking therapy in the home programs. I have concerns about the experience of those advising GPs, nurses or therapists regarding antibiotic use, blood thinners and opiate prescription. In research undertaken by A/Prof Jenny Stephens, opioid prescription following discharge appear a critical factor to prevent ongoing use of habit forming pain medications.<sup>6</sup>

51. In my experience, these matters are best managed by rehabilitation physicians who are not only used to managing illness in people recovering mobility, but skilled in leading teams of nursing and allied health. I have undertaken this role for patients undertaking rehabilitation in the home on a regular basis. I am not familiar with any other specialists that formulate rehabilitation plans, co-ordinate and lead a RITH team for those rehabilitating after joint surgery.

### **Consumer choice**

52. When referred a patient who fulfils criteria for Rehabilitation, I often present the patient with three options for management – (i) RITH with supervision, (ii) Day Rehabilitation at a Rehabilitation Centre, which gives them access to multiple Allied Health disciplines including hydrotherapy or (iii) inpatient rehabilitation.

53. I regularly include the patient in decision making in a transparent manner so that they clearly understand their options and the advantages and disadvantages of each option. In some cases, their particular social circumstances inform their decision to insist on inpatient rehabilitation, while others feel compelled to return home and request RITH, as they feel a duty to care for a pet or a disabled spouse (or child), and others insist on Day Hospital for example, to gain access to hydrotherapy.

54. The decision is made on an individual basis with each patient taking into account their medical, social and environmental issues.

55. The template MPPAs instruct those signing not to tell the patient any details of the commercial arrangements between the PHI and the clinician and, in particular, not to advise the patient of the existence of targets and referrals for rehabilitation in the home.

56. In my professional opinion, the terms of the MPPA affect the doctor-patient relationship and potentially place me and my colleagues in a somewhat duplicitous position when discussing treatment options.

## **Disclosure of confidential information and data usage risks**

57. In my role as the Chairperson of the Management Advisory Group of the Australasian Rehabilitation Outcomes Centre (**AROC**), which is the largest repository of rehabilitation data in the Southern hemisphere, I was aware of the departure of PHIs from participating in the funding of the centre.

58. Data from AROC was – and is – provided to hospitals and Rehabilitation Services for the purposes of quality improvement and benchmarking. Patients are de-identified and the hospitals owned the data.

59. The hospitals have a choice to provide that data to funders such as PHIs although at a patient level only their sex, age and residential post codes would identify them. If the PHIs wanted to check that the individuals were PHI members they would so that the PHI would have to use data analytics to match them to the financial data held by the health funds. In this way PHIs could obtain AROC data as it relates to their members and thereby assessing clinical outcomes, comorbidities, complications, length of stay and hospital efficiencies.

60. As the advanced data resources, now available to nib through HH, have the capabilities to link AROC data to PHI data base, they are would be able to assess patient outcomes from AROC data. If PHI's were to resume the commercial arrangements with AROC for data collection and analysis of their membership this would enhance the transparency of the system. The fact that they are not interested to do this indicates that they are more interested in collected other data that does not directly relate to patient outcomes. This may relate to clinicians or other patient related data that may not be relevant to outcomes. There is no information about what data is to be collected and for what purposes nor is there information on data security, privacy or consent from consumers. This vague request for data by an international data mining company is of great concern to the RMSANZ who play a role in protecting the privacy of clinicians and patients.

61. Further in my experience, data that is identifiable can only be released with patient consent and no mechanism exists in within the MPPA for the provision of that consent (as much of the MPPA is confidential). As a result, the question arises as to the ethics of using identifiable patient level data without patient knowledge and consent.

62. AROC always uses de identified data but on request, members and researchers can ask to generate a report. Researchers have used probabilistic matching of patients to other hospital based identifiers like medical record number (MRN). Data regarding, of which health fund the patient is a member, is not obtained.

63. In my experience, patients are highly variable and as such require individualised rehabilitation plans, so that matching performance indicators to particular physicians will

disadvantage those who choose to work on complex cases, or those who have a subspecialty in developmental disability, or those working in lower socioeconomic areas.

64. While matching performance measures may on the surface sound reasonable, measure of patient complexity need to be added or considered so that “cherry picking” easier patients in order to meet preordained targets is discouraged. AROC has utilised Casemix Adjustment to ensure national Benchmarking comparisons are valid.

65. “Cherry picking” easy cases of post joint replacement rehabilitation, cannot be determined in data sets unless severity of psychosocial determinants of health are factored into the data collection and current research at University of Newcastle shows such complexity is integral to outcomes following total knee arthroplasty.<sup>7</sup> There is no information about what extra fields of data will be required from those signing the MPPAs.

### **Better health outcomes**

66. In my experience, the development of clinical guidelines through a process of better value health, requires a consortium of stake holders, including administrators and consumers, so that patient safety remains paramount and not compromised, while aiming to achieve improved outcomes in a cost effective environment.

67. I have led the ACI’s Clinical Network in Rehabilitation Medicine where principles of how to apply health economics to the development of models of care, and how to evaluate the effectiveness of that new model of care have been published.<sup>8</sup>

68. Departments of Health, Rehabilitation Physicians, RMSANZ and AFRM also rely on the NHMRC documents to develop clinical guidelines to inform guideline developers.<sup>9</sup>

69. In my opinion, the promotion of a rehabilitation in the home model of care for joint arthroplasty can only be considered safe or cost effective if analysis using standards, principles and guidelines such as those described above can be demonstrated. Without careful planning, patient safety cannot be guaranteed and the prevention of patient out of pocket savings is speculative.

Date: 15th May 2022



John Joseph Estell

## References

- 1 - [https://www.racp.edu.au/docs/default-source/advocacy-library/afrm-standards-for-the-provision-of-inpatient-adult-rehabilitation-medicine-services-in-public-and-private-hospitals.pdf?sfvrsn=4690171a\\_4](https://www.racp.edu.au/docs/default-source/advocacy-library/afrm-standards-for-the-provision-of-inpatient-adult-rehabilitation-medicine-services-in-public-and-private-hospitals.pdf?sfvrsn=4690171a_4)
- 2 - <https://aci.health.nsw.gov.au/resources/rehabilitation/rehabilitation-model-of-care/NSW-Rehabilitation-MOC.pdf>
- 3 - [https://aci.health.nsw.gov.au/\\_data/assets/pdf\\_file/0014/500900/rehabilitation-principles.pdf](https://aci.health.nsw.gov.au/_data/assets/pdf_file/0014/500900/rehabilitation-principles.pdf)
- 4 – Appendix B
- 5 - <https://rmsanz.net/wp-content/uploads/2021/09/180503-FINAL-Positon-Statement-on-Rehabilitation-following-TKR-compressed.pdf> AND <https://az659834.vo.msecnd.net/eventsairaeuprod/production-dcconferences-public/d38c0a73a56345b9897c32d32f90b2ce>
- 6 - [https://journals.sagepub.com/doi/full/10.1177/0310057X211065041?casa\\_token=p6VZAXdf5LwAAAAA%3A4zQ5PkGRNpSVRG8v5Bchhta16QKKuvj3NAaH9ecW0vKtmDeHsJm5aehL9fU8e4JCTakGazsiSzAF](https://journals.sagepub.com/doi/full/10.1177/0310057X211065041?casa_token=p6VZAXdf5LwAAAAA%3A4zQ5PkGRNpSVRG8v5Bchhta16QKKuvj3NAaH9ecW0vKtmDeHsJm5aehL9fU8e4JCTakGazsiSzAF)
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- 9 - <https://www.nhmrc.gov.au/guidelinesforguidelines/standards>

## Appendix A

# Extending the Boundaries of Hospital in the Home

## Development of a new Rehabilitation in the Home Program

**Dr Shari Parker**

JP FAFRM MBBS (hons) BScmed (hons)

Rehabilitation Physician



St Vincent's and  
Prince of Wales Hospitals

**RITH**

Rehab In The Home





# My Journey to this conference

- RITH start April 2012, COAG funded June 2013
- Despite short lifespan, well accepted, good outcomes, benefit to hospital
- Ongoing funding not guaranteed
- Other options for RITH?
- Community Services? “Flexicare” HITH
- Discussions underway for alternative RITH options arrangements



# Rehabilitation 101

Recovery from injury / Illness / disease to facilitate maximum function

## Phases

1. Onset of disability, often hospital based
2. Living with a disability –Mx functional decline, Aging with a disability, Chronic disease Mx – usually community based

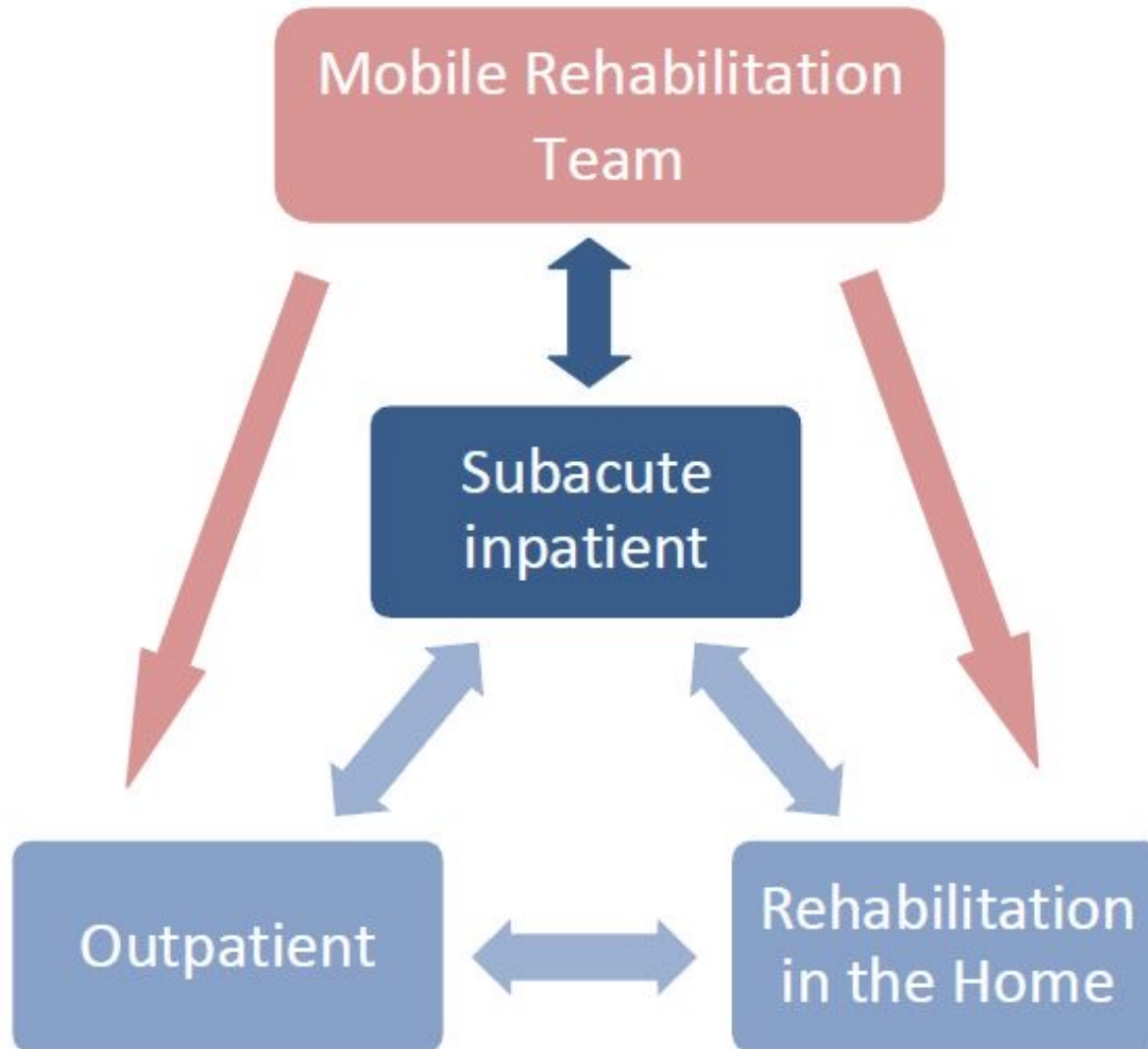


Australasian Faculty of Rehabilitation Medicine  
The Royal Australasian College of Physicians



The Royal Australasian  
College of Physicians

# Rehabilitation at St Vincent's, Sydney





# An integrated pathway

## What service when?

- Right treatment, right patient, right time, right place
- Innovative models of care
- Integration of rehabilitation services across the patient journey
- Shorten LOS in acute and rehabilitation settings
- Outcome = ↑ capacity and efficiency

*A patient with an acute medical illness discharged from the acute hospital after receiving early MRT involvement and discharge planning, thereby avoiding an inpatient rehabilitation admission altogether, consolidated with follow-up at home with RITH. Subsequently, this patient can be referred onto outpatients after the completion of their RITH episode of care to maintain independence.*

# RITH Literature review

Settings general, stroke, #s, jt replacement

Similar outcomes for suitable patients

Improved Quality of life

Improved satisfaction

Patients greater initiative, express goals

# RITH Literature review

Less nosocomial infection

No increase in morbidity, mortality

Shorter LOS, Cost savings

? Increase in hospital presentations

Loss of home as a private place

Home as a public workplace



# Goals of SVH / POWH RITH

1. Structured rehabilitation in domiciliary setting
2. Early discharge from inpatient rehabilitation
3. Early discharge from acute (avoids inpatient rehabilitation admission)
4. Prevent readmission / admissions
5. Functional improvement

**COAG NPA  
2007, \$ to SVH  
2008**

**Policy and  
procedures**

**Car contract  
Office  
Supplies**

**Staged  
introduction  
enhancements**

**Co-ordinator  
January 2012**

**Staff  
Recruitment  
March 2012**

**ITP      OP  
MRT      RITH**

**SLA St  
Vincent's and  
POWH**

**First patient  
enrolled 2  
April 2012**

**Aim = Increase  
capacity and  
efficiency**

**RITH planning  
from mid 2011**

**Last patient  
June 2013**





# Staffing

- **Co-ordinator** 0.5
- **Clinical Nurse Consultant** 0.5
- **Physiotherapy** 2.5
- **Occupational therapy** 2.0
- **Allied Health Assistant** 1.0
- **Social Work** 0.5
- **Speech pathology** 0.2
- **Rehabilitation physician – Medicare**

# Transport

- Go Get, Car Share
- Negotiation – hospital / Go Get / Council to increase vehicles proximate to hospital
- Sedan, station wagons, vans
- Online booking
- Card for access
- Cost savings





# Patient identification

## St Vincent's and Prince of Wales Hospitals

- Rehabilitation team
- Acute Hospital
- Acute rehab team a
- Outpatients
- Community
- Medical, Nursing,  
Allied Health



# Admission Criteria

## RITH preparation

Review by  
RITH  
coordinator

Role in  
discharge  
planning

Discretion of  
Rehabilitatio  
n Physician

Medically  
stable

Liaison with  
referring  
team

Achievable  
goals

Consent

In POW and  
SVH area

Risk  
assessment





# Model of Care

Up to six weeks, weekdays

Therapy 3-5 times per week

Evidence Based treatment

Rehabilitation review  $\geq 1$

Weekly case conference

Family conference when needed



# What RITH isn't

Providers of personal care

Transport service

Long term case management

Primary medical care



# Outcome measures

**AROC  
Ambulatory  
set**

**Lawton's –  
Instrumental  
ADLs**

**Functional  
Independence  
Measure**

**GAS Goal  
Attainment  
Scale Light**

**Spasticity,  
Cognition, UL  
function**

**TUAG, 6  
minute walk,  
Berg, Borg**

**DASS, GDS**

**Aphasia  
Battery etc**





# **FIM = Functional Independence Measure = Impairments, Personal ADLs**

- 18 items, 1 (dependent) to 7 (independent)
- Score out of 126 – higher = greater function
- 13 motor items, 5 cognitive items
- Includes personal ADLs, continence, mobility and communication and cognition
- Primary hospital outcome measure
- Used in RITH - RITH replaces rehab admission



# Lawton's – Domestic & Community ADLs Disability / Handicap

- 8 Categories , score of 1 to 3 or 4 (low = dependent)
- Score 8-30, Valid and reliable
- DADL – Telephone, Cleaning, Laundry
- CADL – Shopping, Community Access, \$
- Medication management



# **GAS Goal Attainment Scale**

- **Heterogenous population with differing  
DIAGNOSES SEVERITY PRIORITIES**
- **Patient's Voice**
- **Collaboration and Communication between  
patient and the team**
- **Should be usable by all disciplines**
- **Outcomes pre-set**
- **0 = expected +1 +2 (better), -1 -2 (worse)**
- **Convert to T score – normal distribution**



# GAS Goal Attainment Scale

## Goals are client specific and functional

Score	Outcome of Goal
+2	Much more than expected outcome <i>Mobilise to the bathroom with no aid</i>
+1	More than expected outcome <i>Mobilise to the bathroom with a walking stick</i>
0	<b>Expected outcome</b> <i>Mobilise to the bathroom with a rollator</i> <span style="border: 1px solid black; padding: 2px;">Raw score 0 = T-score 50</span>
-1	<b>Less than expected outcome</b> <i>Mobilise to the bathroom with FASF</i>
-2	Much less than expected outcome <i>Unable to mobilise to the bathroom with a FASF</i>



# Issues Frequently addressed

Pain  
Spasticity  
falls

Medication  
review and  
management

Depression  
Anxiety  
Adjustment

Wound Bowel  
Bladder

Weakness  
Sensory loss  
↓ balance

Poor  
endurance

Weakness  
Sensory loss  
↓ balance

Ambulation  
Stairs

Personal ADLs  
Equipment  
Modifications



# Issues frequently addressed

Poor endurance

Ambulation  
Stairs

Meal prep  
Laundry  
Cleaning

Comm. Access  
Escalators  
Shopping

Communication

Functional  
cognition

RTW Centrelink  
Services

Swimming  
Golf  
Cycling

Line dancing  
Fishing



# At the end.....

Feedback to  
client / carer  
re goals

Ongoing  
therapy as  
indicated

Rehab  
Medicine  
review

Other  
specialist  
review

Services as  
indicated

Multi-disc  
Discharge  
summary

Satisfaction  
survey

AROC  
Rehab M&M



# Results

## The first 13 Months

1. RITH Perspective
2. Patient perspective – feedback
3. Executive perspective – financial analysis





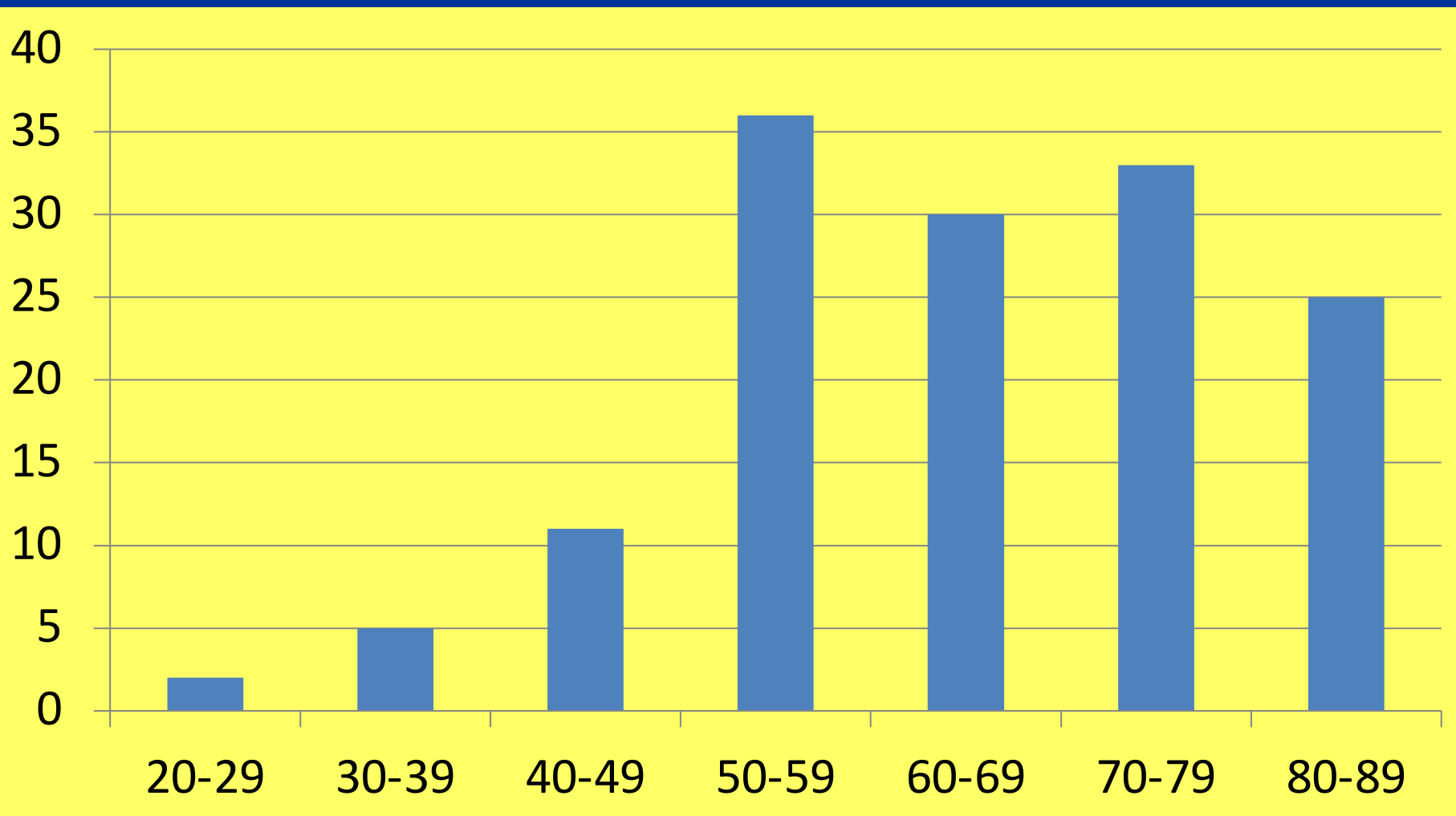
# Results

- 140 completed packages, 152 commenced
- 56% Male 44% female
- Ready for rehab to admission 1.5 days
  
- Average LOS = 35 days      5 weeks
- Average Occasional of service = 23.7
- Average 1 visit each weekday



Age

Avg 56.1

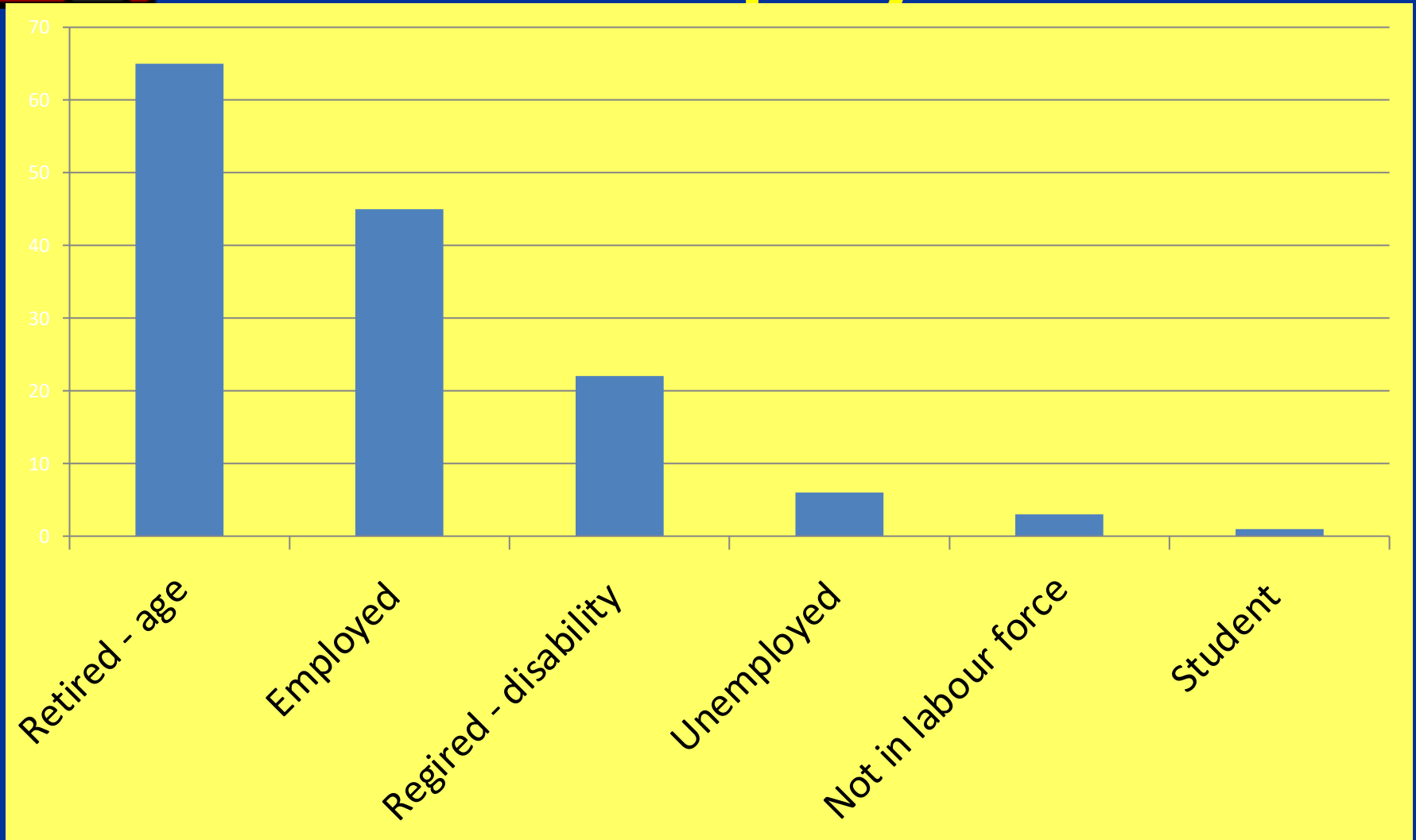




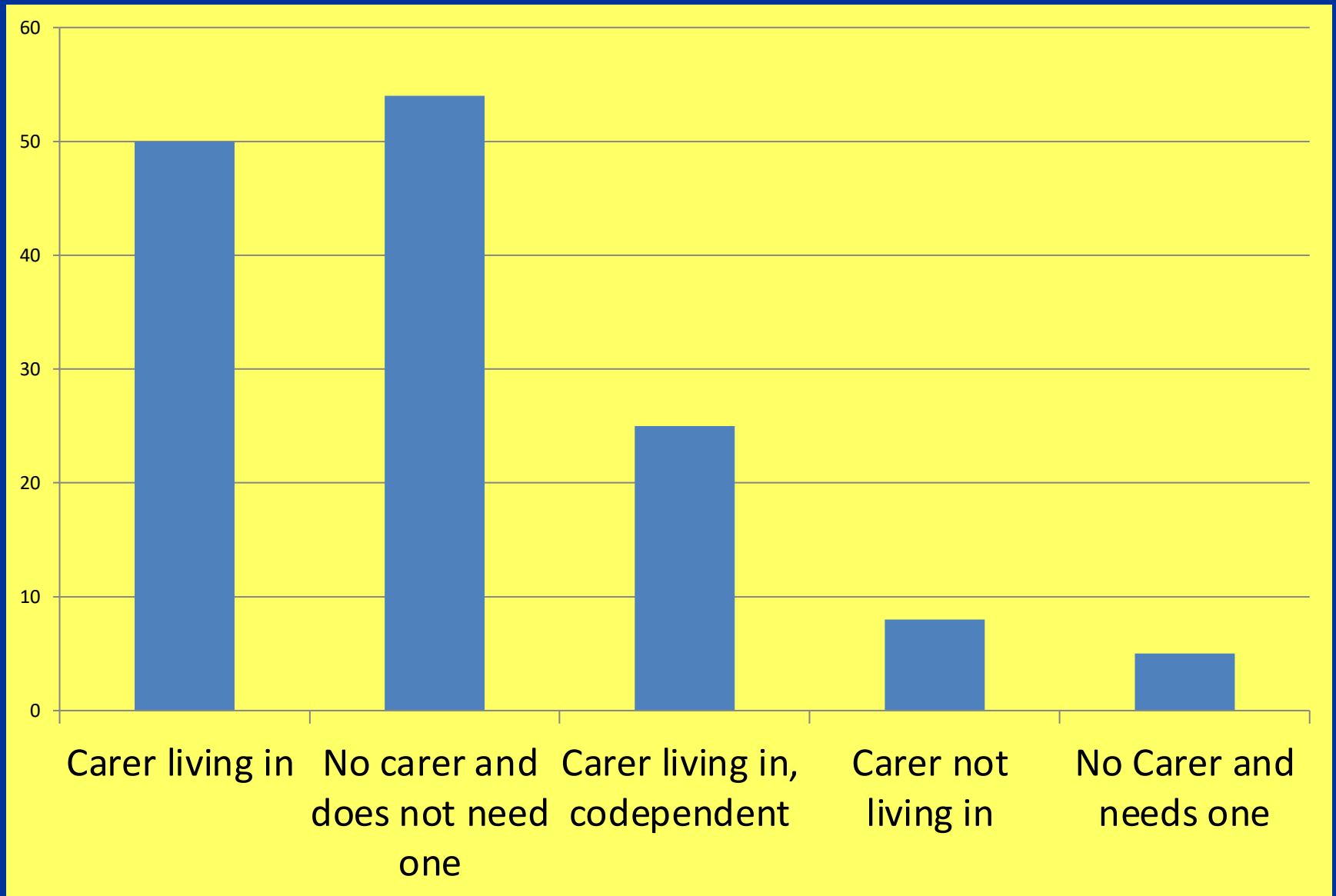


# Employment status

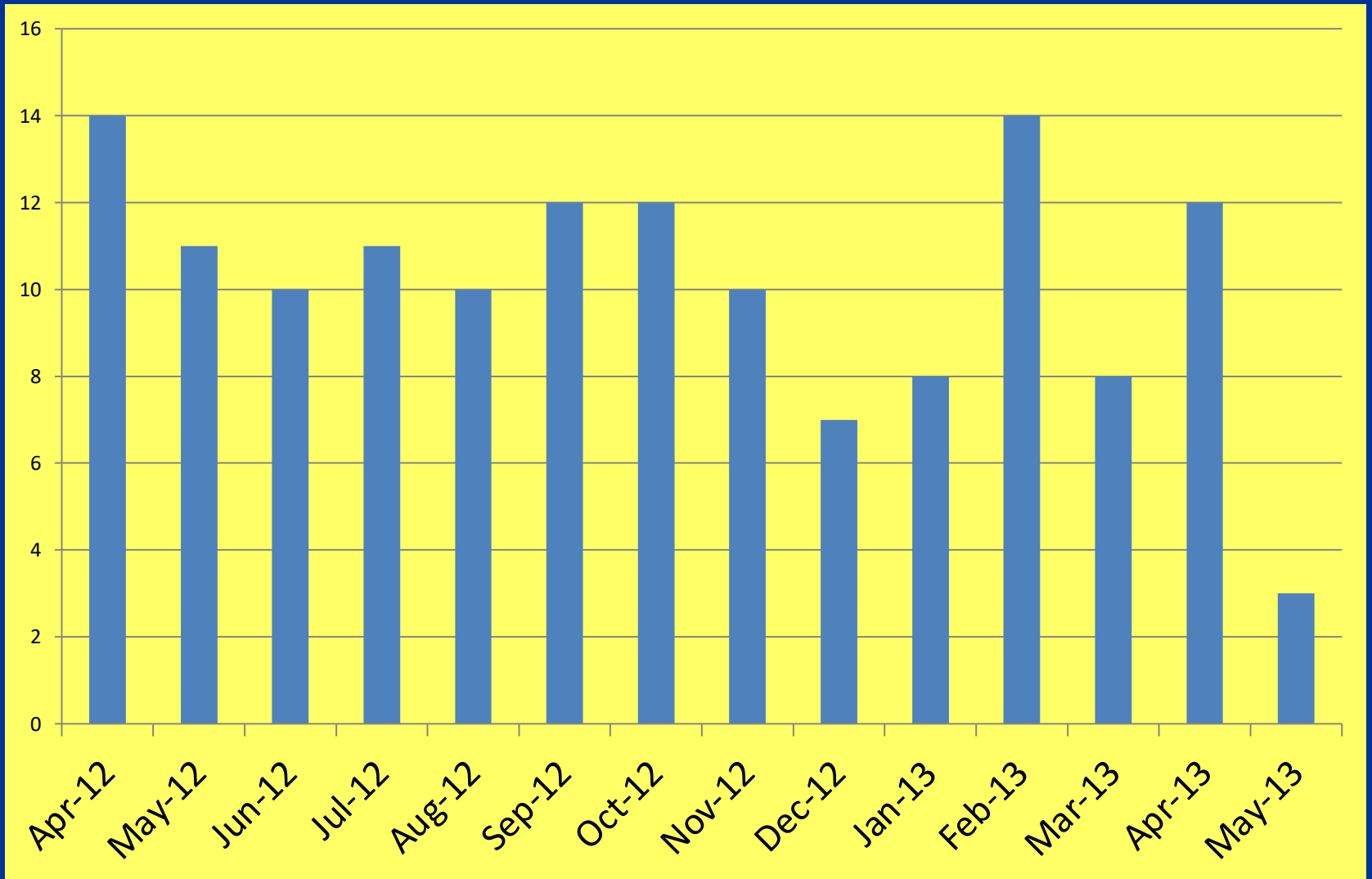
## 45% employed



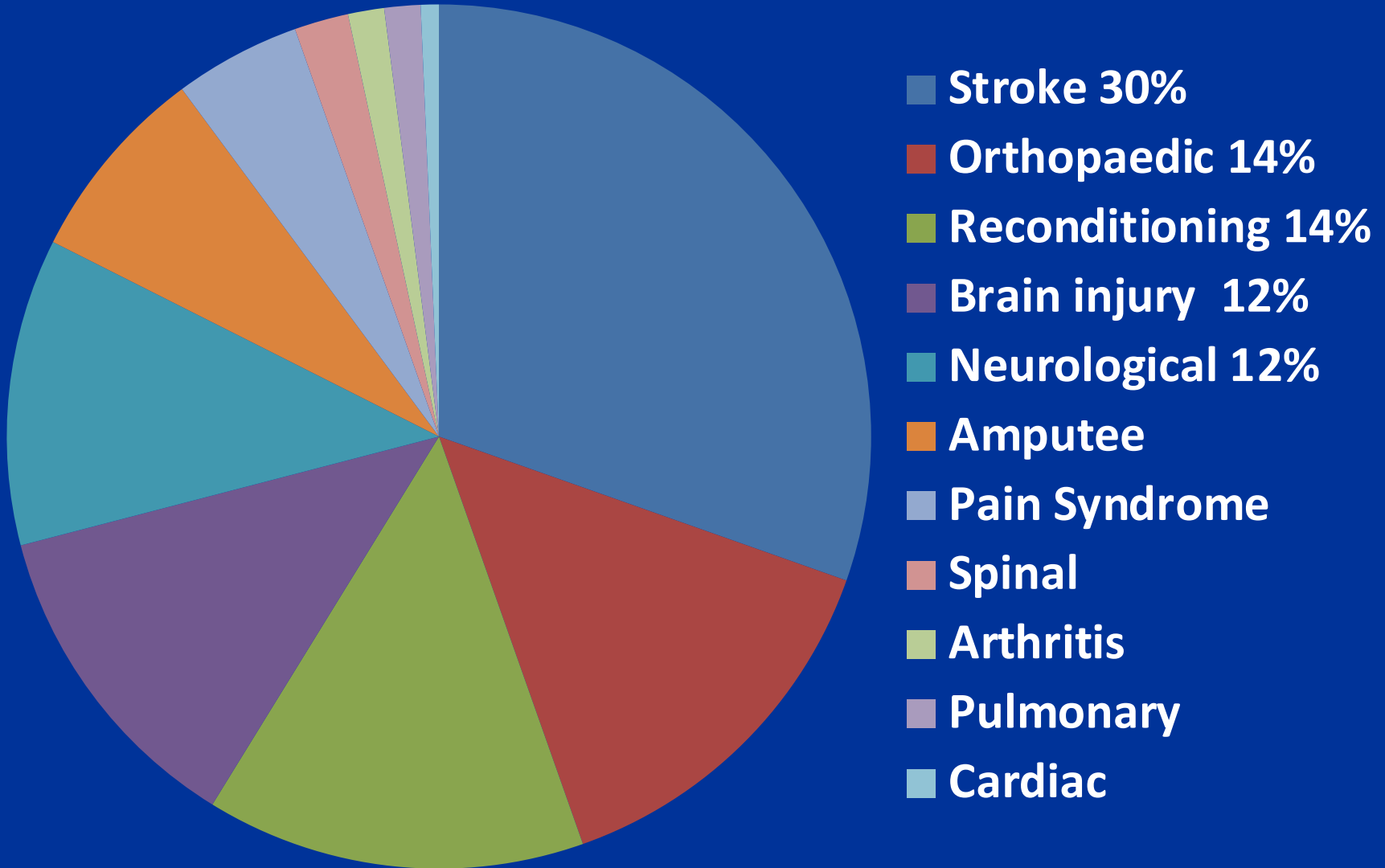
# Carer status 83% carer



# Admissions per month avg 10

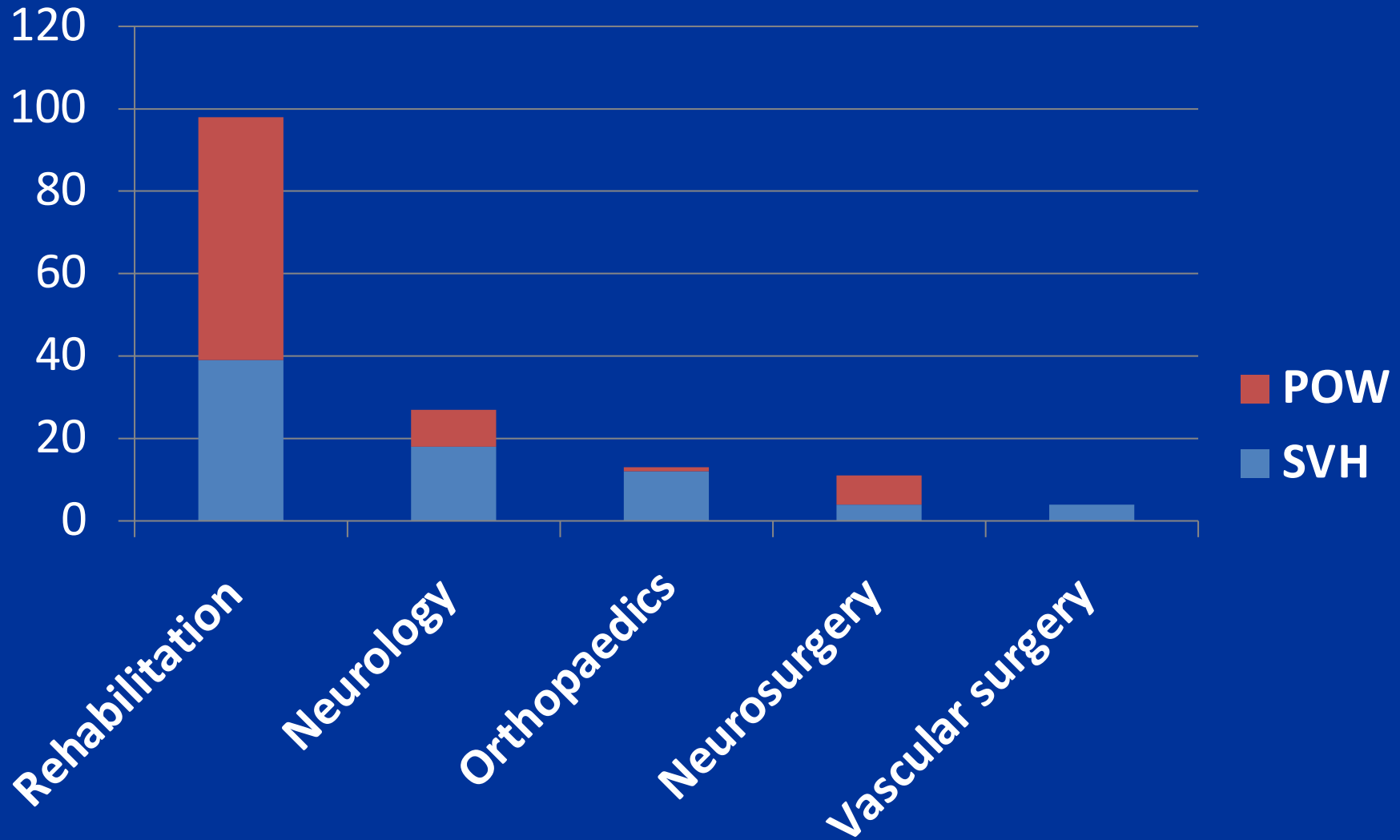


# Impairments



# Referral source

## 53% POW 47% SVH







# Other outcomes

	<b>Lawton start</b>	<b>Lawton end</b>	<b>FIM START</b>	<b>FIM end</b>	<b>FIM eff</b>
<b>TOTAL</b>	17.3	23.0	99.2	109.9	0.29
<b>SVH</b>	18.2	24.0	102.0	112.2	0.30
<b>POW</b>	16.5	22.1	97.0	108.1	0.28



# Overall Outcomes COAG

- 23% reduction inpatient rehabilitation LOS (23.9 to 18.4 days)
- 77% ↑ inpatient rehabilitation episodes





# Client Feedback 45% return

*Did you receive what you wanted / needed from your Rehabilitation Program?*

*Yes 98%    Somewhat 2%*

*How well did the therapists include you in planning goals specific to your needs?*

*Extremely 87%    Very well 13%*

*How satisfied were you with the quality of care provided by the RITH team?*

*Extremely 91%%    Very 9%*

*“The patient was able to leave the hospital and receive this program at home, achieving their independence and establishing a plan.”*

*“To be able to rebuild your skills in your own home is a good thing.”*

*“RITH regained my mobility, capability and confidence around the house.”*

*“What I liked about the programme was that it was holistic, the therapist professional, very caring and encouraging. Outings were great, did a lot for the spirit and confidence. It was evident that RITH works as a team.”*

*“This service definitely added to a faster & more enjoyable recovery for my mother & our nan. It has reduced the stress on the family who had to conform to hospital times during working hours in order to take part in her recovery.”*

*“The only way of improvement is if the program became a permanent fixture for all to access.”*



# Show me the money!

**Bang for your buck?**

**Rehabilitation enhancements (RITH, MRT, OP, ITP) produced an annual efficiency of \$4,854,247 for an investment of \$1,121,924.**

**Enhancements have generated an efficiency equivalent to an increased capacity by 17.9 beds (at 90% occupancy)**



# Facilitators



- Co-ordinator with local knowledge
- Referral process – KISS
- True Multi and Trans-disciplinary team
- Structured goal setting / case conferencing
- Flexibility with package parameters according to pt needs (length, frequency, interruptions)
- Office co-location with Mobile Rehab Team
- Innovations – Share car, ipads



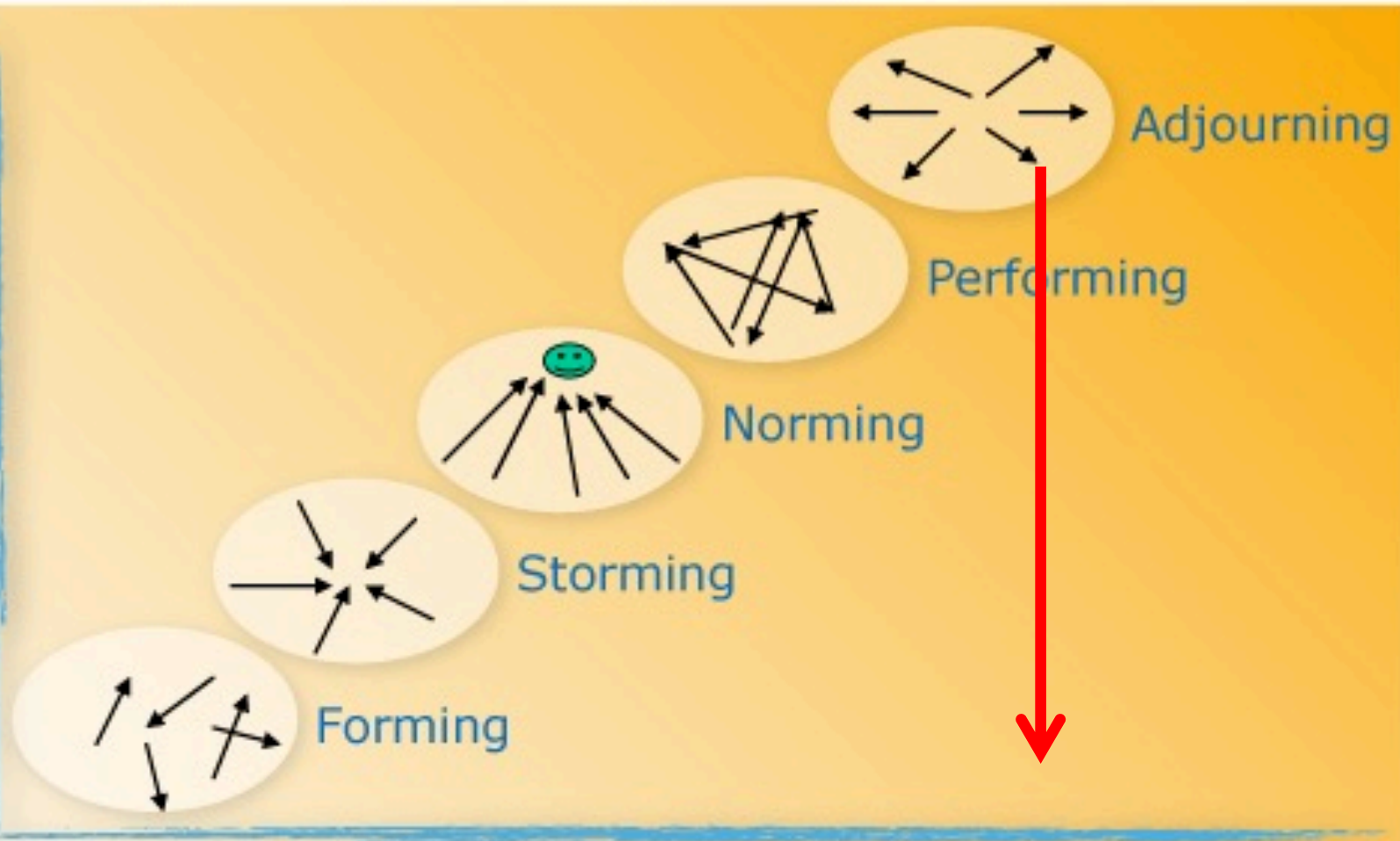


# Barriers



- Hospital reluctance to bear risk of “letting go” – paradigm shift
- Delay with start of speech pathology
- Funding uncertainty

Team effectiveness



Time





Changes  
NEXT EXIT →

# Post June 30 2013

- ↑ inpatient rehabilitation LOS 5.4 days
- ↓ capacity of inpatient rehabilitation of 229 separations per year
- 9 – 10 patients /week occupying acute beds in the acute hospital, waiting an average of 10-14 days for inpatient rehabilitation beds
- 1- 2 fewer t/f from ED to acute wards / day
- Loss of access by young disabled to domiciliary rehabilitation



# Where to from here?

- Via HITH (Geriatrics mx) but ?  
planning, groundwork, staff  
engagement
- Lobbying at all levels
- Capturing outcomes from all staff  
with GAS including SW, medical
- ABF considerations



# Take home messages

## CHOOSE

- **to look** outside the hospital walls, break down the silos
- **your data** well to make good argument
- **your team** – skills, flexibility, teamwork, tenacity
- **your battles**, never give up..



# Acknowledgements

- Ian Harris
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- Dr Greg Bowring





Thankyou





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## Appendix B

# Victoria's implementation of the National Funding Model

Workshop 2 – System Impact,  
Information Technology and Data  
Management

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Department  
of Health

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# Workshop and forward agenda

## **Disclaimer**

The workshops include current thinking by the department as not all decisions are final. Final decisions will be communicated through the Policy and Funding Guidelines.

We are keen to work with health services to address any key considerations, understand your concerns and make sure that we can ensure Victoria's implementation maintains funding certainty for your health service.

## **Questions and Answers**

Questions and answers functionality will be enabled. Voting on the questions can occur so that we are can consider those most important to you.

We will aim to answer then at the end of the session or provide answers to FAQs via our website.

# Workshop structure



Two workshop streams:

1. Operations, finance and administration (today)
2. System impact, information technology and data management (next week)

The purpose of the different streams is to tailor information to the relevant operators in health services and keep a constant dialogue pre and post national funding model implementation.

Today there will be two sessions

1. **Recap of the NFM overview**
2. **Health Service Data and Health Technology Solutions**

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## Workshop touchpoints

March

April

May

June

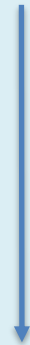
July

October

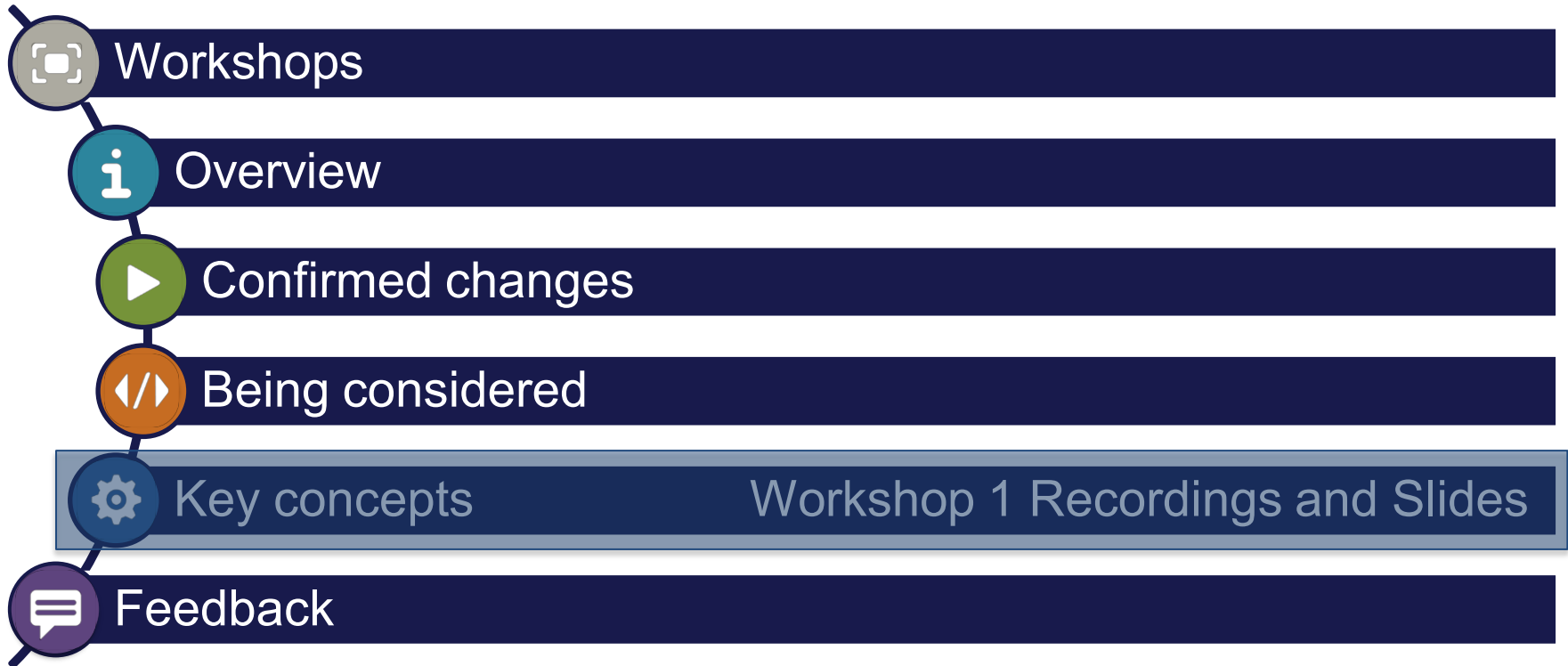
December

Pre  
implementation

Post  
implementation



# Victoria's implementation of the National Funding Model



# Session 1 – Victoria's implementation of the National Funding Model



Overview



Confirmed changes



Being considered



Feedback

- Context – NHRA
- Victoria's approach
- Recurrent budget certainty
- Minimisation of disruptions

# Context – National Health Reform Agreement



The National Funding Model is driven by the National Health Reform Agreement (NHRA). The objectives of the NHRA are to:

- **Share the future cost of growth in the efficient price and service provision equally between the State and Commonwealth** [2016 addendum adjusted it to 45% Commonwealth with a 6.5% p.a. growth cap]
- **Establish a national approach to activity-based funding (ABF) for public hospitals, with the provision of block funding where ABF is not possible** [2016 addendum requires a Statement of assurance from States and Territories on completeness and accuracy of data]
- **Ensure strong national standards to improve clinical safety and quality in hospitals and health care settings** [2016 addendum introduced pricing for safety and quality]
- **Enhance transparency on the performance of hospital and health care services** [2020 addendum confirms the current national bodies and data requirements]
- **Enable innovative models of care** [2020 addendum introduced long-term health reform principles regarding technology assessments, paying for values and outcomes, joint planning and funding, health literacy, prevention and wellbeing, enhancing data]



# Victoria's approach and implementation



The rationale of the adoption of the NFM is:

1. To meet Victoria's commitment in the National Health Reform Agreement – increasing our ability to influence the ongoing development of the National Funding Model and position future funding reforms that reflect appropriate models of care.
2. Better align Victoria with the rest of the Commonwealth – ensuring consistency of funding decisions and implementation and earlier access to cost and price weights impacts as well as the ability for services and specialities to benchmark nationally.
3. Enable health services to be more flexible with resources across services types – a common funding measure can more easily enable future reforms across services, which will be needed in a post COVID-19 environment.

Victoria's implementation seeks to providing budget certainty for recurrent services and minimise disruptions in the adoption.

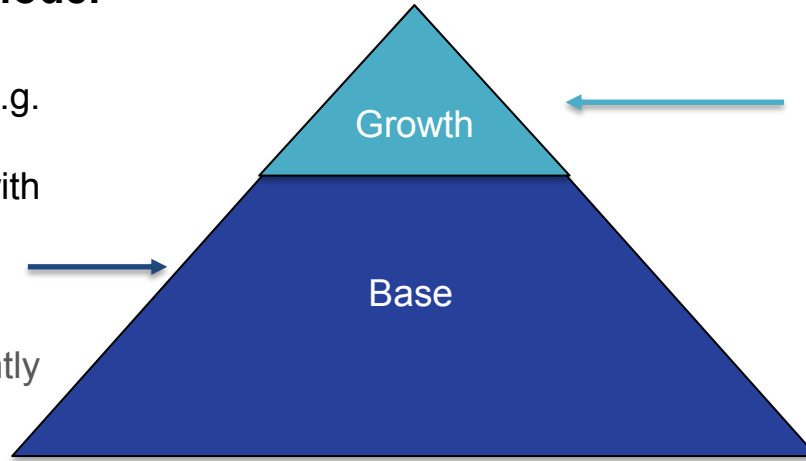
# Providing recurrent budget certainty in the transition



Under Victoria's implementation, your existing 2020-21 recurrent budget will be guaranteed subject to recall and throughput policies. This means:

## (1) Your existing recurrent funding will not change due to the implementation of the National Funding Model

2020-21 recurrent funding\* (e.g. WIES/S-WIES/WASE) will become a base grant along with your existing specified/state-wide grants. Your existing services will be funded at the level you currently deliver.



2021-22 and future growth activity funding will be funded using the National Funding Model set at the Victorian Efficient Price. Your future services will be funded at the level your 'peer' group delivers.

\*one-off funding (e.g. COVID-19 support) will not count towards your base funding. Determinations on funding amounts will be provided at a later date.

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# Providing recurrent budget certainty in the transition



## **(2) We will be adjusting price to keep funding constant and inline with budget outcomes**

While you will need to continue to generate sufficient National Weighted Activity Units to cover your Statement of Priority targets, your 2021-22 revenue is not driven solely by activity. This has been determined as:

- it ensures the maintenance of your existing budget base
- it does not expose you to price volatility from the National Funding Model. Since Victoria only influences ~ 25% of all national activity and cost data, and price fluctuates annually, it could lead to varying budgets from year to year for the same level of activity.

This approach is consistent with the National Funding Model more broadly, as it is a model that at a Commonwealth level determines the size and allocation of growth funding.

This approach may change in the future when we are confident that it does not lead to adverse effects on Victoria's health services.

# Minimising disruptions with the implementation



## Same structure and weightings as the National Funding Model

Victoria's implementation seeks to be a reasonably 'pure' implementation of the model which aligns with national approaches as it:

- Will not currently deviate from the weights that determine the National Weighted Activity Units (NWAU) for each unit of grouped activity.
- Removes Victorian modifications to the Diagnostic Related Groups. Activity will now be grouped to the unmodified Australian Refined Diagnosis Related Groups.

This allows health services to use national calculators (i.e. Independent Hospital Pricing Authority) to determine the level of activity they produce and apply the determinations made at a national level when they are developed, rather than waiting for the Victorian translation and modification.

# Minimising disruptions with the implementation



## Phased implementation to minimise disruptions

Services that could face significant funding disruptions are not currently changing.

Setting	Service type	Current approach	1 July 2021 approach	Future
Acute	Inpatient services	WIES	Yes – NWAU	
	Non-admitted specialist services	WASE	Yes – NWAU	
	Emergency department	NAESG	Yes – NWAU	
Sub-acute	Inpatient services	S-WIES	Yes – NWAU	
	Non-admitted services	Block funded	Yes – NWAU	
State-wide	Specified grants	Block funded	Partially – where applicable to the Victorian Efficient Price	TBC
	State-wide services	Block funded		TBC
	Teaching and Training	Block funded	Remain as is	Remain as is
Services	Mental Health	Non-admitted unit prices and admitted bed days	Not moving to NWAU	TBC
	Small Rural Services	Block funded	Current block funding approach continues.	TBC

# Victoria's implementation of the National Funding Model



Overview



Confirmed changes



- Services
- Funding



Being considered



Feedback

# Confirmed changes



## Services

- Admitted acute, sub-acute and non-acute care; non-admitted activity and emergency department funded services will transition to the national approach from 1 July 2021.
- The National Funding Model will not apply to Small Rural Health Services – although activity will be reported in NWAU.
- The National Funding Model will not apply to Mental Health activity – noting the Royal Commission report into Victoria's Mental Health System and IHPA's shadow approach to 2021-22 funding.

## Funding

- Your recurrent funding in 2020-21 (e.g. WIES/WASE/S-WIES) will become a base grant. Variable grants will be contingent on delivering base NWAU.
- Your existing specified grants will be preserved. Outcomes for those grants are expected to continue.

# Confirmed changes



## Funding (continued)

- The Victorian Efficient Price, not the National Efficient Price, will be applied in Victoria.
  - This is consistent with other States and Territories and will be the method that ensures growth funding is in line with the Victorian Government's budget determinations.
  - Victorian Efficient Price structure has been proposed to address remoteness implications on health services.
- Victorian DRG modifications cease and that the unmodified National AR-DRG classification version 10 apply from 1 July 2021.
- National Funding Model concepts will be applied including approaches outlined in the National Efficient Cost and National Efficient Price determinations and policies. These may be excluded on a by exception basis.
- Teaching, training and research activities will continue to be block funded based on the advice of states and territories.
- Adoption of a flat rate indigenous loading of 4 per cent (adopted in 2020-21).



# Victoria's implementation of the National Funding Model



Overview



Confirmed changes



Being considered

- Our thoughts
- Your thoughts



Feedback

# Being considered



## Our thoughts

- Statement of Priority targets for services that are changing in the National Funding Model (e.g. non-admitted activity, emergency department presentations, intensive care units)
- Recall/throughput policy application
- Pricing for Quality and Safety related adjustments under the national model
- Ensures services are not unduly influenced by NFM changes and will seek to monitor unintended consequences
  - Clinical code, practices changes, length of stay boundary changes
  - Non-admitted service models and service event derivation rules
- Private and public service mix and recurrent funding for existing service

# Being considered



## Your thoughts

What are the biggest considerations we should be thinking about or working with you on?

### **NWAU conversions of your health service activity on the Secure Data Exchange**

[Health service]-NWAU.xlsx was uploaded to your account on the Secure Data Exchange portal that contains two years of patient-level activity converted into an NWAU as VAED (acute admitted, subacute), VEMD and non-admitted national dataset (NAPED) for health services.

While we are undertaking this analysis at the system level, we understand you may want to use the data for your own inhouse purposes. We're keen to understand the impacts you identify for your own services because of the translations. As this will flow into ongoing growth funding in future years we can use this information to identify and lobby for changes that should be made with the national funding model.

# Being considered



## Your thoughts

What are the biggest considerations we should be thinking about or working with you on?

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# Being considered



## Workshop 1 Q & A

**Recall** – Recall under the NFM model is being considered and will be confirmed in the Policy and Funding guidelines.

**Admission policy** – The Victorian Admitted Episodes Dataset: Criteria for Reporting will continue to set out the rules for reporting of an admitted patient.

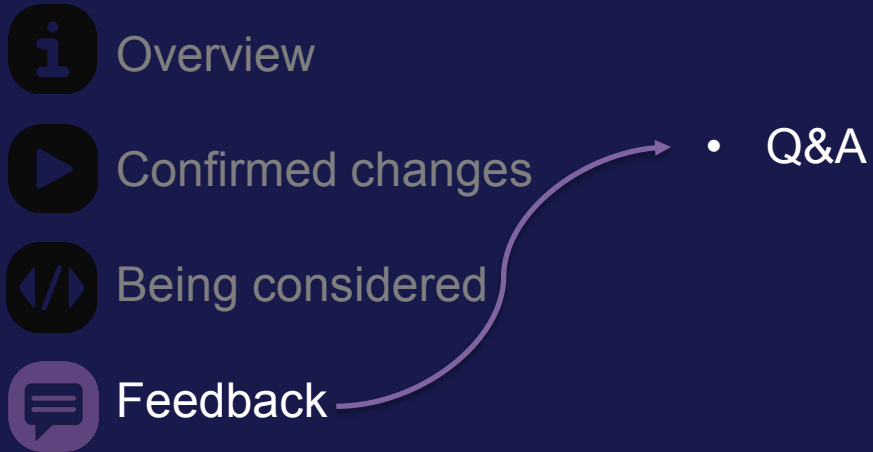
**Private activity** – The Department does not propose that distinct public and private prices will apply in the Victorian Efficient Price.

**Adjustments and loading** – NWAU will be applied as it exists in the NFM including to ICU, patient regional and remoteness loadings.

**Price** – The Victorian Efficient Price is currently being determined.

Theme	Number
Recall policy	7
Reports and data to health services	7
Admission policy	5
Private activity	4
Adjustments and loadings	4
Price	3
Financial	3
Non admitted activity	3
Data submission	3
Workshop recording	2
Base funding	2
Urgent Care Centre	2
Targets	2
NWAU	2
Growth	2
Models of care	1
Specified grants	1
Technical	1
Quality and safety	1
Implementation support	1
Health service governance	1
Timelines	1
Terminology	1
Mental health	1

# Victoria's implementation of the National Funding Model

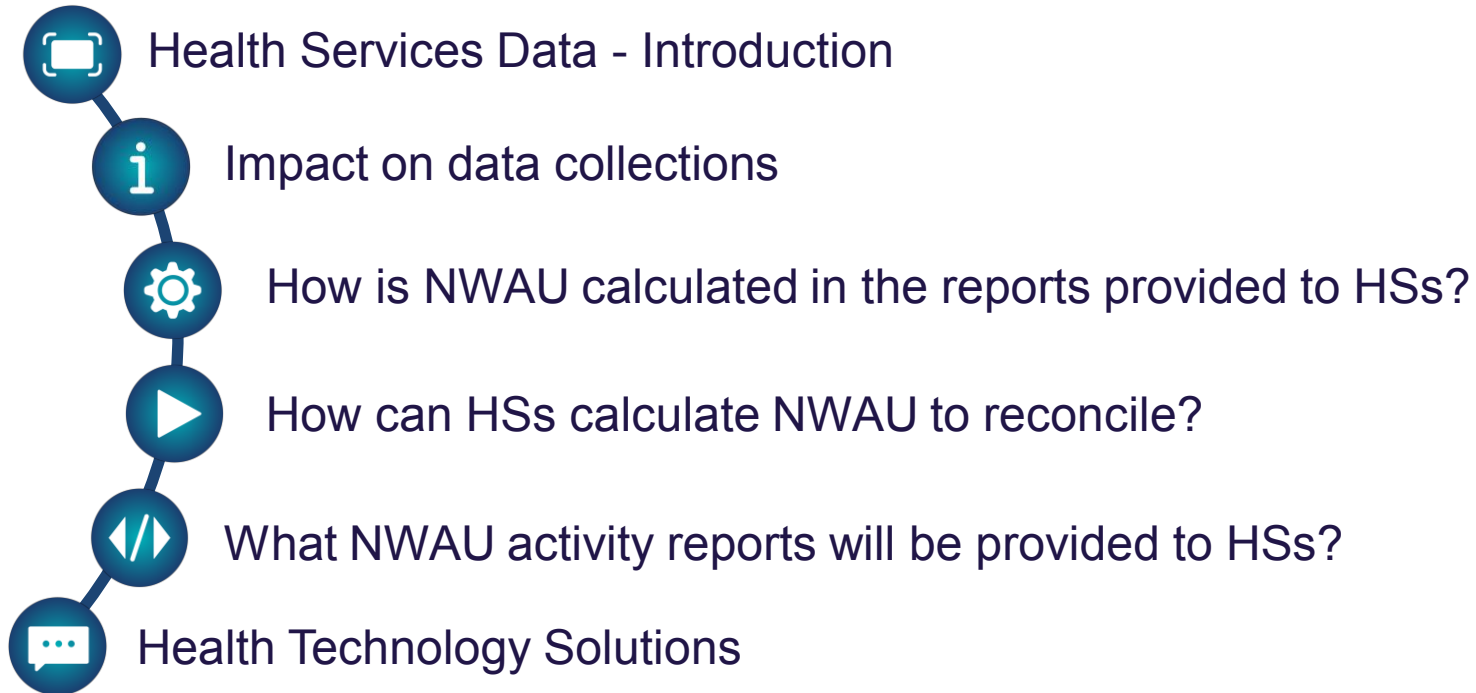


# Victoria's implementation of the National Funding Model

## Session 1 Q&A

You can post and vote on the questions so that we know what is most important to you – we will seek to answer as many in writing today as possible.

# Session 2 – Victoria's implementation of the National Funding Model





# Victoria's implementation of the National Funding Model

## **Health Services Data**

# HSD managed datasets

1. Victorian Admitted Episodes Dataset (VAED)
2. Victorian Emergency Minimum Dataset (VEMD)
3. Elective Surgery Information System (ESIS)
4. Victorian Integrated Non-Admitted Health Minimum Dataset (VINAH)
5. Victorian Perinatal Data Collection (VPDC)
6. AIMS (Agency Information Management System)
7. CMI/ODS, Victorian Alcohol and Drug Collection (VADC) and the Needle and Syringe Program (NSP), MH Establishment (MHE), MH Triage and Forensic Mental Health in Community Health (FMHiCH).



# HSD key activities



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# What does the implementation of the National Funding Model look like?

WIES will cease  NWAU instead

WIES co-payments cease  National NWAU adjustments

Vic DRG's cease  AR-DRG instead

Vic price(s) instead of national price

No Vic modifications to NWAU cost weights in 2021–22

National HAC risk-adjusted NWAU

# What does it mean from a data collection perspective?

## **Health services are not required to report NWAU to the Department of Health**

The annual changes for 2021–22, published in December 2020, detailed the essential additional data elements required by IHPA.

<https://www2.health.vic.gov.au/hospitals-and-health-services/data-reporting/health-data-standards-systems/annual-changes>

A determination was made that Victoria will not derive an SA2 code but will use postcode to determine the residential remoteness adjustment for IHPA submitted data.

## And changes to non-admitted patient activity...

From 1<sup>st</sup> July 2021, IHPA will only accept patient level data for non-admitted activity.

The HSD Non-Admitted Data Expansion (NADE) project aims to have revenue recoverable non-admitted activity, currently reported at an aggregate level in the AIMS data collection, reported at patient level to the IHPA in the 2021–22 financial year.

The project comprises a series of individual subprojects relating to the various funded programs. VINAH remains the main focus of reporting patient level activity.

Assistance for transition to patient level reporting should be directed to the NADE Project via the [HDSS helpdesk](https://hdss.helpdesk@health.vic.gov.au) [hdss.helpdesk@health.vic.gov.au](mailto:hdss.helpdesk@health.vic.gov.au)

# How does HSD calculate NWAU?

IHPA publishes a range of calculators to assist health services and jurisdictions to replicate their NWAU calculations faithfully.

The department uses the IHPA provided proprietary SAS calculator for acute admitted episodes, and has replicated the calculator logic for other collections.

In 2021–22, the HAC-adjusted NWAU calculator will be applied to acute admitted episodes following the VAED refresh. Non-admitted and Emergency NWAU is calculated daily.

To convert relevant Victorian code sets into the national versions upon which the IHPA calculators are based, the Victorian mapping for NWAU tables were developed.

# How can health services calculate NWAU?

IHPA publishes a range of NWAU calculators: <https://www.ihpa.gov.au/national-weighted-activity-unit-nwau-calculators/nwau-calculators-2021-22>

IHPA technical specifications can be found here:  
<https://www.ihpa.gov.au/publications/national-pricing-model-technical-specifications-2021-22>

To convert relevant Victorian code sets into the national versions upon which the IHPA NWAU calculators are based on, the Victorian mapping for NWAU tables will be available from the HDSS website by end of March 2021.

The NWAU price weight tables can be downloaded here:  
<https://www.ihpa.gov.au/publications/national-efficient-price-determination-2021-22>



# What NWAU activity reports will the department provide you with?

## Victorian Admitted Episode Dataset (VAED)

- Hospital activity and NWAU report
- The NWAU activity report will be provided monthly following the VAED refresh
- Will include NWAU adjustments (e.g. NWAU adjustment for Hospital-Acquired Complications (HAC's))
- Pick-up via MFT
- WorkSafe statements will include NWAU



# NWAU activity reports provided to health services...

## Victorian Integrated Non-Admitted Health dataset (VINAH)

- Patient level extract
- Self-serve in HealthCollect
- Will include all non-admitted NWAU adjustments and NWAU



# NWAU activity reports provided to health services...

## Victorian Emergency Minimum Dataset (VEMD)

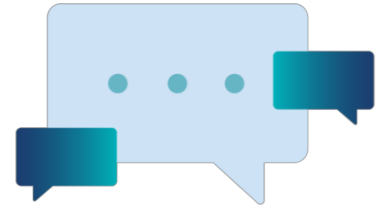
- Pick up via MFT
- Provided monthly
- The report will provide a count of ED presentations by compensable class and provide NWAU adjustments



# Next steps

Consult with your vendors re: incorporating the NWAU calculator and the Victorian mapping into your hospital systems.

IHPA's NWAU calculators and specifications are accessible from the IHPA website and can be used by Health Services and their vendors.



# Victoria's implementation of the National Funding Model

## **Health Technology Solutions**

# Health Technology Solutions

The objective is to deliver required system changes to Health Technology Solutions delivered IT systems used by 38 public hospitals to enable for support of the National Funding Model.

Systems include i.Patient Manager and 3M Codefinder used by health services to code/group episodes and provide statutory reports VAED, VEMD and VINAH.

There are hospitals in every state of Australia, other than Victoria, with NWAU calculation enabled in Codefinder.

# Business Requirements

- Current WIES co-payments which are not in the national model will not exist going forward; Of note:
  - Radiotherapy Vic-DRG is covered under a national radiotherapy adjustment
  - The national ICU co-payment replaces the Vic co-payment for non-invasive ventilation and mechanical ventilation;
  - There is a national Indigenous-status adjustment that is at the same rate as the current VIC Indigenous-status co-payment.

# Business Requirements

- There will no longer be reporting of Vic-DRGs.
- No Vic modifications of AR-DRG have been identified for 2021-22. If not in the AR-DRG, it will not attract funding going forward.
- No Vic cost weights will apply.
- There will be Vic prices – currently unknown but likely based on hospital peer groupings and not program-based.



# Business Requirements

- Victoria will not derive an SA2 but will use postcode in its submission to determine the residential remoteness adjustment for IHPA submitted data.
- National HAC risk adjusted NWAU will be reported.
- National avoidable readmissions risk-adjusted NWAU will not be reported at this time.

# Business Requirements

The following three Vic-DRGs that exist would cease from July 2021:

L42Z – Vic mod for lithotripsy introduced in WIES27 because it was removed from the version 10 AR-DRG (national classification) and was preserved as a Vic mod to allow special funding conditions for this type of service to continue under the WIES model.

R64Z – Vic mod for radiotherapy – persistent as a Vic mod for a number of years. Arises from a historic policy decision to fund a common group of activity which is otherwise grouped to a range of national DRGs

B02Y – Endovascular Clot Retrieval– persistent as a Vic mod for a number of years. Arises from a historic policy decision which otherwise would have grouped to adjacent National B02 Cranial procedures DRG

# Inclusions and exclusions for HTS implementation

## **Inclusions:**

- NWAU for Acute Admitted
- NWAU for Sub Acute/Non-Acute Admitted

## **Exclusions (Note Emergency/Non-Admitted is include in the transition):**

- NWAU for Emergency
- NWAU for Non-Admitted
- NWAU for Mental Health

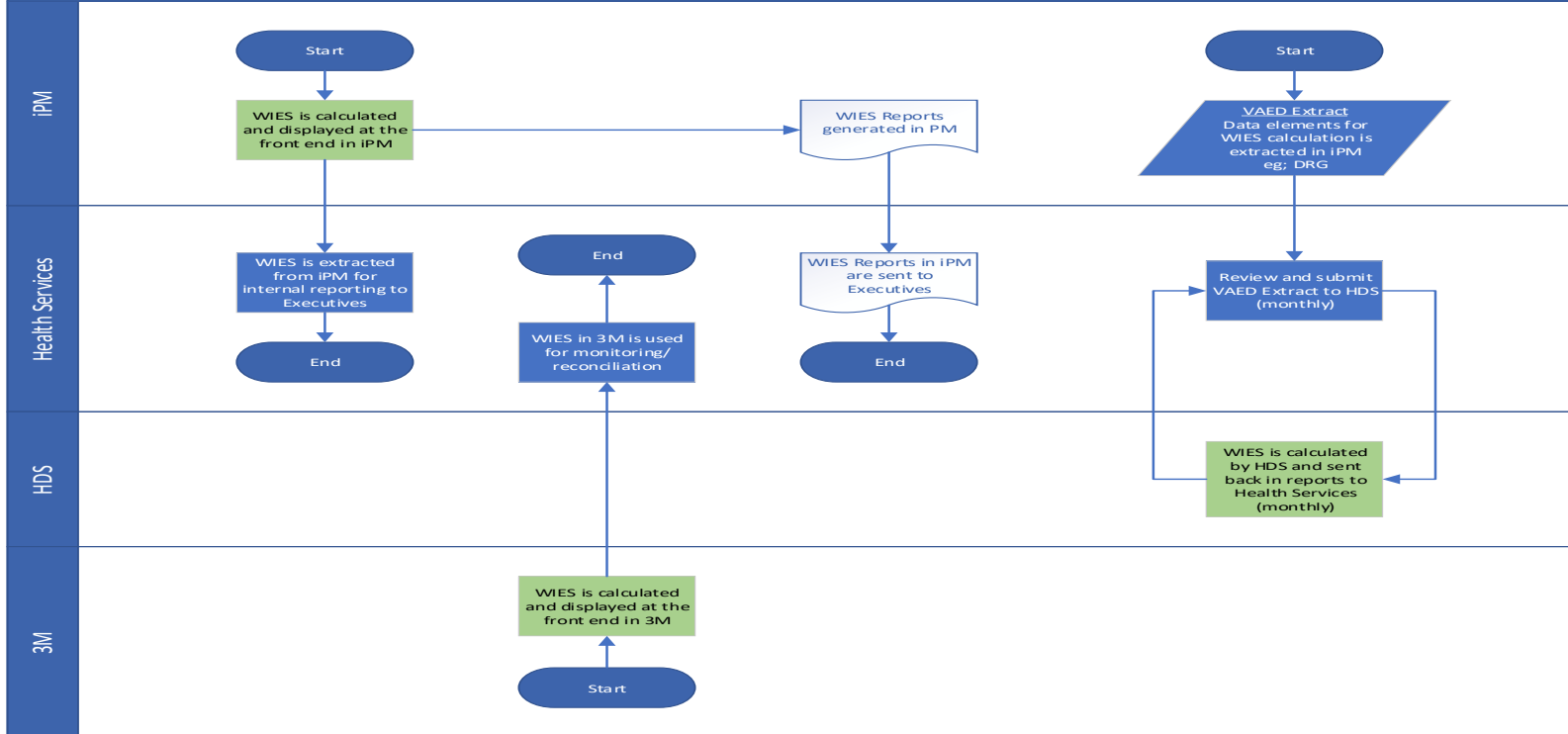
# Work Breakdown Structure/Estimated Timeframe

Task	Vendor	Estimated Timeframe	Comments
<b>NWAW for Acute Admitted (3M Codefinder)</b>	3M	July 2021	Changes will be required in 3M if there are Victorian modifications
<b>NWAW for Acute Admitted (iPM to 3M Codefinder Interface)</b>	DXC	July 2021	Changes will be required to the interface if there are Victorian modifications
<b>NWAW for Acute Admitted (3M GPCS)</b>	3M	July 2021	Changes will be required in 3M to enable coding and grouping in iPM
<b>NWAW for Acute Admitted (iPM to 3M GPCS Interface)</b>	DXC	Oct 2021	Changes will be required to the interface to enable coding and grouping in iPM
<b>NWAW for Sub Acute/Non-Acute (3M Codefinder)</b>	3M	Currently being evaluated	Changes will be required in 3M. HTS will fund these changes.
<b>NWAW for Sub Acute/Non-Acute (iPM to 3M Codefinder Interface)</b>	DXC	Currently being evaluated	Changes will be required to the interface. HTS will fund these changes.

# Current Implementation for WIES in iPM and 3M

## WIES for Acute Admitted As-Is (High Level) - HTS (Draft)

**Note:** The same implementation applies to AN-SNAP WIES except 3M does not calculate AN-SNAP WIES



# WIES in iPM

The screen shot below is the Casemix tab in the Uncoded Episodes View displaying WIES value using the WIES cost weights loaded and WIES stored procedure within i.PM

The screenshot shows a software window titled "Discharge Codes - 10000100 - Mr Ztestone Singh - 21/07/2018 - 38 years". The window is divided into several sections:

- Discharge:** Casemix | Coding |
- Admission/Discharge Details:**
  - Admission date: 02/07/2018, 10:00
  - Discharge date: 02/07/2018, 22:12
  - LOS: 1
  - Leave Days: 0
  - Theatre date: / /
  - Care Type: Acute inc Qual Newborn
- Main DRG Details:**
  - Code: B700
  - Description: [B700] Stroke and Other Cerebrovas
  - Version: DRG90
  - Rel. Weight: 1.0761
  - Ave LOS: 2.6
  - Low Tri: 0
  - High Tri: 8
  - MDC Code:
  - Description:
  - PCCL Code:
  - Description:
- Fund DRG Details:**
  - Code:
  - Description:
  - Version:
- Casemix Details:**
  - WIES Value: 1.0761
  - WIES Revenue: 107.61
  - ISNAC Value:
  - ISNAC Revenue:

At the bottom of the window, there are buttons for "Edit Patient...", "Edit Disch...", "3M Encoder...", a checkbox for "3M Grouping", and "OK" and "Cancel" buttons.

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# WIES in 3M Codefinder

The screen shot below is the 3M Codefinder displaying WIES value using the WIES cost weights loaded and WIES stored procedure within 3M Codefinder.

The screenshot displays the 3M Codefinder interface for a patient with the following details: Age: 25, Gender: Female, Admit Date: 09/07/2020, Separ Date: 11/07/2020, LOS: 3, DSP: Home/Other (9). The main display area shows the ICD-10-AM/ACHI Summary for the diagnosis E62A Respiratory Infections and Inflammations, Major Complexity. The WIES Score is 1.3267. The Estimated Reimbursement - Victoria WIES section shows a WIES Funding of \$ 0.00, WIES Version of 27, WIES Score of 1.3267, Base WIES of 1.3267, and Indigenous Status of (0) - Invalid value used. The ICD-10-AM Principal Diagnosis is B012 Varicella pneumonia.

Version	DRG	Weight	Total
10.0	E62A	1.3267	\$0.00

Version	DRG	Weight	Total
9.0	E62A	1.3262	\$8419.52

Version	DRG	Weight	Total
10.0	E62A	1.5741	\$5374.21

Age: 25 Gender: Female Admit Date: 09/07/2020 Separ Date: 11/07/2020 LOS: 3 DSP: Home/Other (9)

**Victoria DRG PCL/ECCS and MDC Information**

**E62A Respiratory Infections and Inflammations, Major Complexity**  
VIC INL Wt 1.3267 ALOS 4.7 LT 1 HT 14 SDWT 0.6604 SSWT 0.0000 DWT 1.3267  
IHPA Inlier Wgt 1.5741 Lower Bound 1 Upper Bound 18 Same Day 0.0000 ALOS 6.0

**3 Episode Clinical Complexity Score**  
A ECCS >= 2.5  
B ECCS < 2.5

**004 Diseases and Disorders of the Respiratory System**

**Additional DRG Information**  
DRG Version: 10.0  
ICD-10-AM Edition: 11.0  
Date Of Admission: 09/07/2020  
Date Of Separation: 11/07/2020  
Length Of Stay: 3  
Same Day Status: Not Same Day  
Age: 25  
Admit Weight: n/a  
Sex: Female  
Separation Mode: Home/Other (9)  
HITH Length of Stay: 0

**Estimated Reimbursement - Victoria WIES**

WIES Funding	\$ 0.00
WIES Version	27
WIES Score	1.3267
Base WIES	1.3267
Indigenous Status	(0) - Invalid value
Care Type	Not specified, default value used

**ICD-10-AM Principal Diagnosis**

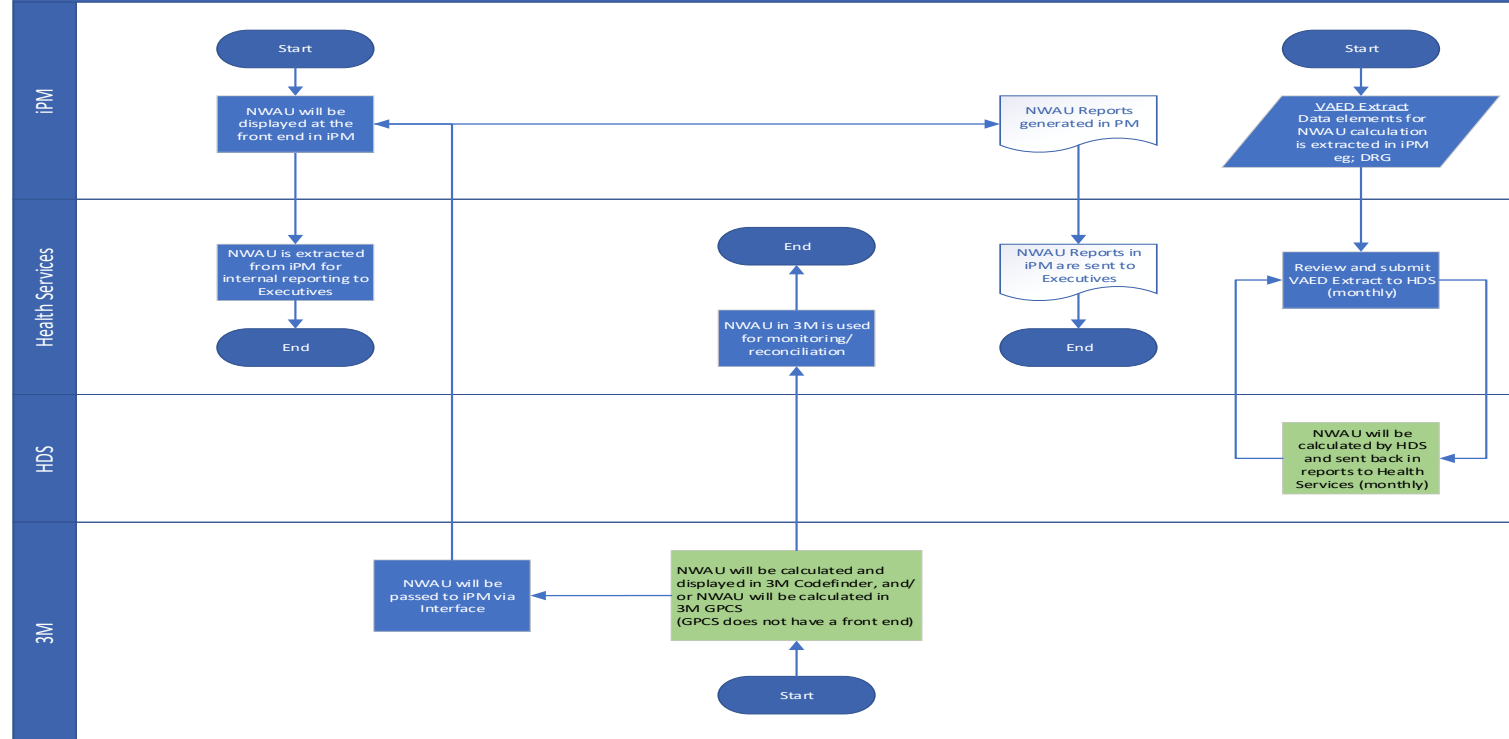
Code	Description
B012	Varicella pneumonia

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# Proposed Implementation for NWAU in iPM and 3M

## NWAU for Acute Admitted To-Be (High Level) - HTS (Draft)

**Note:** The same implementation will apply for Sub Acute/Non-Acute NWAU



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# Proposed screen for NWAU in iPM

The screen shot below is the Uncoded Episodes View, Discharge tab displaying NWAU, ALOS, Inlier and Outlier values retrieved from 3M.

The screenshot shows a software window titled "Discharge Codes - Taylor, Juane". The window is divided into several sections:

- Discharge | Coding | demo40**
- Admission/Discharge Details:**
  - Admission date: 11/05/2020, 18:43
  - Discharge date: 11/05/2020, 18:47
  - Clinician: Oak, Dr Stephanie
  - Ref to on Sep: District Nursing
  - Specialty: Psychiatry
  - Mode of Sep: Discharge by Hospital
  - Ward: abc
  - Intention to re-admit: Not Specified
  - Theatre date: / /
  - Service Category: Not Specified
- Clinical Details:**
  - Ad. weight (g): [ ] ICU(hh:mm): 0000:00 CCU(hh:mm): 0000:00 Mech. vent. (hrs): 0
  - Palliative care: No (dropdown) Ambulance No: [ ] Non-Invasive vent. (hrs): [ ]
- Grouping:**
  - DRG: D60B DF Fund DRG: [ ] MDC: 003 MDC LOS: 0 WIES: [ ]
  - ALOS: 2.4 Inlier weight: 0.9841 Outlier weight: [ ] NWAU: 0.3447** (highlighted with a red box)

A blue callout box points to the NWAU field with the text: "4 new read only text fields to populate NWAU details from 3M Codefinder".

At the bottom of the window, there are buttons for "Edit Patient...", "Edit Disch...", "3M Encoder...", "3M Grouping" (checkbox), "OK", and "Cancel".

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# Proposed screen for NWAU in 3M Codefinder

The screen shot below is the 3M Codefinder displaying NWAU value using the NWAU cost weights loaded and NWAU stored procedure within 3M Codefinder.

The screenshot displays the 3M Codefinder interface for DRG F67B. The top section shows the DRG Summary with a table:

Version	DRG	Victoria Weight	Total
10.0	F67B	0.2421	\$1287.86

Below this, the ICD-10-AM/ACHI Summary for F67B is shown, including clinical details like 'Hypertension, Minor Complexity' and 'Episode Clinical Complexity Score'. The 'Additional DRG Information' section contains a table of reimbursement metrics:

DRG Version: 10.0	
Estimated Reimbursement - National Activity Based Funding	
National Price	\$ 1287.86
Weighted Activity Unit	0.2421
Base Weight	0.2603
Gross Weighted Activity Unit	0.2707
HAC Complexity Group	Low
HAC Adjustment	0.1100
Indigenous Adjustment	0.0400
Indigenous Status	(2) - Torres Strait Islander but not Aboriginal origin
Patient Status	(4) Inlier
Funding Source	Not stated, default value of 01 (Health Service Budget) used
Number of Qualified Days	0
Admit Mode	(3) Other
Care Type	Not specified, default value of 1 - Acute care used

Three callout boxes highlight specific values in the reimbursement table:

- 'Estimated reimbursement using national price' points to the National Price of \$1287.86.
- 'NWAU including all adjustments' points to the Weighted Activity Unit of 0.2421.
- 'NWAU with adjustments other than HAC reduction' points to the Gross Weighted Activity Unit of 0.2707.

The bottom section shows the ICD-10-AM Principal Diagnosis (I10 - Essential (primary) hypertension) and an Additional Diagnosis (L89.33 - Pressure injury, stage IV, upper back).

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# Victoria's implementation of the National Funding Model

## Session 2 Q&A

You can post and vote on the questions so that we know what is most important to you – we will seek to answer as many in writing today as possible.

# Victoria's implementation of the National Funding Model

## Thank you

- We will use the questions and post-workshop survey to inform April workshop sessions structure and content
- Slides and FAQs will be going live at the department's website (this March): <https://www2.health.vic.gov.au/hospitals-and-health-services/funding-performance-accountability/activity-based-funding>
- Consider and address queries to the National Funding Model inbox at <NationalFundingModel@dhhs.vic.gov.au>

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In this presentation, 'Aboriginal' refers to both Aboriginal and Torres Strait Islander people. 'Indigenous' or 'Koori/Koorie' is retained when part of the title of a report, program or quotation.

Will be made available at insert web site <<https://www2.health.vic.gov.au/hospitals-and-health-services/funding-performance-accountability/activity-based-funding>>

# **CURRICULUM VITAE**

# *Curriculum Vitae*

## *John Joseph Estell*

**Date of Birth:** 28th September 1967

**Place of Birth:** Wollongong, Australia

**Address:**

**Home:** PO Box 355  
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**Mobile:** 0407 409 128

**Work:** St George Hospital  
Department of Rehabilitation Medicine  
Belgrave St KOGARAH NSW 2217

**Ph:** (02) 9113 2267

**Fax:** (02) 9113 3952

**Work:** Calvary Hospital  
Department of Aged Care and Rehabilitation Medicine  
Rocky Point Rd KOGARAH NSW 2217

**Ph:** (02) 9553 3111

**Work:** Waratah Private Hospital  
31 Dora St  
HURSTVILLE NSW 2220

**Ph:** (02) 9598 0000 Mon, Wed, Fri pm

**Fax:** (02) 9598 0015

**Qualifications:**

FAFRM(RACP) 2002 (Fellow Australasian Faculty of Rehabilitation Medicine)

FSDrA 1999 (Fellow Sports Doctors Australia)

M. Sp. Med. 1998 University of New South Wales

M.B. B.S. 1992 University of New South Wales

B. Sc. 1989 University of New South Wales

**Professional Organisations:**

Fellow, Australasian Faculty of Rehabilitation Medicine

Member, Rehabilitation Medicine Society of Australia and New Zealand

Life Member, Sports Medicine Australia

Fellow, Sports Doctors Australia

**Awards:**

Richard F Jones Award – 2002 (SESAHS)

Adrian Paul Prize – 2003 (AFRM)

**Hospital Positions:**

2008-current Staff Specialist (0.6FTE)

St George Hospital Belgrave St KOGARAH NSW 2217

2009-current Director, Department of Rehabilitation Medicine

St George Hospital, Belgrave St KOGARAH NSW 2217

2020-current Staff Specialist, Director, Department of Rehabilitation Medicine (0.2FTE)

Calvary Hospital Rocky Point Rd KOGARAH NSW 2217

2017-current Medical Lead, Aged and Extended Care Division, St George Hospital

2017-current Chairman, Medical Staff Council, St George Hospital

2018-current Chairman, Medical Staff Executive Council, SESLHD

2014 – current Member, Medical Appointments Committee Waratah Private Hospital

2016 – 2020 Chairman, Morbidity and Mortality Committee Waratah Private Hospital

2015- 2017 Chairman, Medical Appointments Committee Sydney Private Hospital

2005- 2015 Member, Medical Appointments Committee Sydney Private Hospital

2003-8 **Staff Specialist (0.5FTE)**

Braeside Hospital, Locked Bag 82 WETHERILL PARK 2164

**Private Rehabilitation Medicine Practice**

- St Luke's Centre for Rehabilitation and Injury Management 2003-8
- Sydney Private Hospital 2005- 2017
- Waratah Private Hospital 2015-current



**Company Positions**

- 2004-current Director, Rehabilitation Medicine Associates Pty Ltd
- 2008 – 2014 Director, Independent Hospitals Australia Pty Ltd
- 2002-current Director, Joali Enterprises Pty Ltd
- 2022 – current Board Member, SESLHD (NSW Health)
- 2010-current Executive Member ACI Rehabilitation Network
- 2019- 2022 Medical Co-Chair ACI Rehabilitation Network
- 2018-current Chairman, Management Advisory Group – Australian Rehabilitation Outcomes Centre
- 2016-current Member, Independent Hospital Pricing Authority Sub-Acute Group
- 2016-current Member Sub-Acute Expert Working Group, Ministry Of Health NSW

**Committee Positions:**

- 2008- 2012 Member, Ethics Committee, St George Hospital
- 2008- current Member, SESIAHS Stroke Working Party
- 2008 – 2012 Member SESIAHS Central Network Clinical Council
- 2008 – current Member SESLHD Clinical Council
- 2010 – 2018 Member Australian Rehabilitation Outcomes Centre – SCAC
- 2008- 2017 Member, ACI Stroke Network, Rehabilitation and Recovery Working Party

**Education:** 2002 Fellow Australian Faculty of Rehabilitation Medicine

1994-7 University of New South Wales  
Masters of Sports Medicine

1989-91 University of New South Wales  
Bachelor of Medicine, Bachelor of Surgery

1986-8 University of New South Wales  
Bachelor of Science (Majors: Anatomy, Biochemistry, Physiology)

**Elected Positions:**

- 1993-2001 Club Medical Officer, Illawarra District Rugby League Club (Steelers)  
Australian Rugby League
- 1994-2001 Medical Officer, New South Wales Rugby League  
Junior City and State Rugby League Teams
- 1998-9 Medical Officer, Australian Rugby League Junior Kangaroos Team
- 1998 Medical Officer, World Wheelchair Basketball Championships, Sydney,  
Australia
- 1999-2004 Council Member, Sports Doctors Australia
- 2000 Medical Officer, Sydney Paralympics, Wheelchair Basketball
- 1995 Consultant Medical Officer, "Gladiators" Television program, Channel 7

**Principle Investigator – St George Hospital**

- 2019 Prospective, randomized, double-blind, placebo-controlled, multi-centre study to investigate the efficacy and safety of NT 201 in the treatment of lower limb spasticity caused by stroke or traumatic brain injury in adult subjects, followed by an open label extension with or without combined upper limb treatment (Australian PI)
- 2014 An International, Multi-centre, Observational, Prospective, Longitudinal Cohort Study to Assess the Impact of Integrated Upper Limb Spasticity Management Including the Use of BoNT-A Injections on Patient-centred Goal Attainment in Real Life Practice - ULIS III (Y-79-52120-206)
- 2012 Dysport Phase 3 Study in Adult Lower Limb (Y-52-52120-140 & 142)
- 2012 Acute Rehabilitation Initiative. *A randomised controlled trial in early inpatient rehabilitation for patients hospitalised after road accidents.*
- 2010 ROARI – Road Accident Rehabilitation Initiative

**Selected Publications:**

- Estell J.** *Protective Equipment in Sport.* Chapter in Oxford Handbook of Sports Medicine (Sherry E. and Wilson S. editors) *p818-845.*
- Estell J., Barnsley L., Shenstone B.** *Frequency of Injuries in Different Age-groups in an Elite Rugby League Club.* (Australian Journal of Science and Medicine in Sport **27(4): 95-97**)
- Estell J., Kohler F., Connolly C., and Renton R.** *Long Term survival of patients following an inpatient rehabilitation admission.* Internal Medicine Journal 2006: 36 (Suppl. 5): A182

- Kohler F. Dickson H. Redmond H. **Estell J.** Connolly C. *Agreement of Functional Independence Measure Item Scores in Patients Transferred from One Rehabilitation Setting to Another.* European Journal of Physical & Rehabilitation Medicine.. 45(4):479-85, 2009 Dec.
- Kohler F. Redmond H. Dickson H. Connolly C. **Estell J.** *Inter-rater reliability of functional status scores for patients transferred from one rehabilitation setting to another.* Archives of Physical Medicine & Rehabilitation. 91(7):1031-7, 2010 Jul.
- Friedbert Kohler, Roger Renton, Hugh G. Dickson, **John Estell** and Carol E. Connolly *Subacute casemix classification for stroke rehabilitation in Australia. How well does AN-SNAP v2 explain variance in outcomes?* Australian Health Review Volume 35(1) 2011, pp1-8
- Wu J; Faux SG; **Estell J**; Wilson S; Harris I; Poulos CJ; Klein L. *Early rehabilitation after hospital admission for road trauma using an in-reach multidisciplinary team: a randomised controlled trial* Clinical Rehabilitation. 31(9):1189-1200, 2017 Sep.
- Faux SG; Kohler F; Mozer R; Klein LA; Courtenay S; D'Amours SK; Chapman J; **Estell J.** *The ROARI project - Road Accident Acute Rehabilitation Initiative: a randomised clinical trial of two targeted early interventions for road-related trauma.* Clinical Rehabilitation. 29(7):639-52, 2015 Jul.
- Poulos, Christopher J; Eagar, Kathy; Faux, Steven G; **Estell, John J**; Crotty, Maria. *Subacute care funding in the firing line.* Medical Journal of Australia. 199(2):92-3, 2013 Jul 22.
- Estell J.** *Injury Rates in Elite Rugby League Players - Effects of Change in Playing Rules.* (Proceedings 1995 Annual Conference of Science and Medicine in Sport)
- Estell J.**, Reiter L., Barnsley L., Shenstone B. *Medical Support to Sporting Associations in NSW.* (Proceedings 1995 Annual Conference of Science and Medicine in Sport)
- Lambert S., **Estell J.**, Rigney L. and Kannangara S. *A Comparison of Three Commercially Available Breath-By-Breath Exercise Testing Systems.* (Proceedings 1995 Annual Conference of Science and Medicine in Sport)
- Estell J.**, Wilson S., and Mount S. *The Australian Multi-Disability Games* (Proceedings 1996 Annual Conference of Science and Medicine in Sport).
- Reiter L., Prouten M., Rigney L., Lambert S., **Estell J.**, and Barnsley L. *Physiological Characteristics of Female Soccer Players: Laboratory and Match-Play Assessments.* (Proceedings 1996 Annual Conference of Science and Medicine in Sport).

**Estell J.**, Lord P., Barnsley L., Shenstone B., and Kannangara S. *The Physiological Demands of Rugby League*. (Proceedings 1996 Annual Conference of Science and Medicine in Sport).

**Estell J.** and Jones M. *Frequency of Injuries in Different Playing Positions in an Elite Rugby League Club*. (Proceedings 1996 Annual Conference of Science and Medicine in Sport).

Cole A. and **Estell J.** *Outcomes in Rehabilitation of Cancer Survivors From Different Ethnic Groups* Archives of Physical Medicine and Rehabilitation, Volume 87, Issue 11, November 2006, Page e9

Connolly C, Lee D, **Estell J**, Renton R. *Comparison of stroke outcomes after rehabilitation of patients from different ethnic backgrounds*. In: Abstracts: 16<sup>th</sup> European Stroke Conference, p42, 29 May-1 June 2007, Glasgow,UK

### **Presentations:**

**Estell J.** *Injury Rates in Elite Rugby League Players - Effects of Change in Playing Rules*. (**Prize for Best Clinical Research Presentation** -Concord Hospital Annual Clinical Week 1995)

#### SMA South Eastern Sports Medicine Conference - Thredbo 1997

**Estell J.** *Injury Profiles in Rugby League*

**Estell J.** *Real Time Heart rate Monitoring in Rugby League*

#### 6th Annual Scientific Meeting, Australasian Faculty of Rehabilitation Medicine Sydney 1998

**Estell J.** *Rehabilitation Databases*

#### Annual Scientific Meeting, Royal Australasian College of Physicians Sydney 2001

**Estell J.** Hodgkinson A. Veerabangsa A. Simpson G. *Predictive Value of ICU Assessments in ultimate Outcome of Brain Injury Patients*.

#### 11th Annual Scientific Meeting, Australasian Faculty of Rehabilitation Medicine Hobart 2003

**Estell J.** and Katrak P. *Profile of a Metropolitan Rehabilitation Service* (**Awarded Adrian Paul Prize**)

#### Stroke Society of Australasia Sydney 2003

Katrak P. and **Estell J.** *Strokes at the turn of the Century*

#### 5th World Stroke Congress – Vancouver Canada 2004

Katrak P. and **Estell J.** – *Stroke Rehabilitation in Sydney Australia 1999-2002* (Poster)

#### 14th Annual Scientific Meeting, Australasian Faculty of Rehabilitation Medicine Cairns 2006

**Estell J.**, Kohler F., Connolly C., and Renton R. *Use of SF-36 in a Day Rehabilitation Setting*

**Estell J.**, Kohler F., Connolly C., and Renton R. *An evaluation of the survival period of patients following an inpatient rehabilitation admission.*

Connolly C., **Estell J.**, Kohler F., and Renton R. *Comparison of different models of care for early management of amputees.*

Kohler F., Renton R., Connolly C., and **Estell J.** *What are the factors contributing to long length of stay as inpatients on a rehabilitation ward?*

Renton R., Connolly C., **Estell J.**, and Kohler F. *Rehabilitation Outcome after First Stroke* (Poster)

Lee D., Renton R., and **Estell J.** *Comparison of Stroke Outcomes after Rehabilitation between patients from different ethnic backgrounds.* (Poster)

Annual Scientific Meeting, Australian Society for Geriatric Medicine Christchurch  
New Zealand 2006

**Estell J.**, Kohler F., Connolly C., and Renton R. *Long Term survival of patients following an inpatient rehabilitation admission.* (Poster)

15th Annual Scientific Meeting, Australasian Faculty of Rehabilitation Medicine Sydney 2007

**Estell J.**, Cole A., Kohler F., Connolly C., and Renton R. *Outcomes in Rehabilitation of Cancer Survivors from Different Ethnic Groups: A Ten-Year Experience*

**Estell J.**, Kohler F., Connolly C., and Renton R. *An Evaluation of the Survival Period of Patients following an Inpatient Rehabilitation Admission*

**Estell J.** *Managing with Electronic Support*

Connolly C., **Estell J.**, Kohler F., and Renton R. *A Five-Year Review of Complications in the Rehabilitation Setting*

Connolly C., **Estell J.**, Xu J., Kohler F., and Renton R. *The Incidence, Type and Effects of Medical Complications on Patients in a Rehabilitation Ward*

Kohler F., **Estell J.**, Connolly C., and Renton R. *A 13 Year Review of Long-stay Patients in a Rehabilitation Unit*

Xu J., Connolly C., **Estell J.**, Kohler F., and Renton R. *Comparison of Different Approaches to the Early Prosthetic Management of Trans-Tibial Amputees.*

4th World Congress of ISPMR, Seoul, Korea 2007

**Estell J.**, Cole A., Kohler F., Connolly C., and Renton R. *Outcomes in Rehabilitation of Cancer Survivors from Different Ethnic Groups: A Ten-Year Experience*

**Estell J.**, Cole A., Kohler F., Connolly C., and Renton R. *An Evaluation of the Survival Period of Cancer Rehabilitation Patients Following an Inpatient Rehabilitation Admission.* (Poster)

5<sup>th</sup> Australasian Conference on Safety and Quality in Health Care – Brisbane 2007

**Estell J.**, Kohler F., Connolly C., and Renton R. *Long Term Survival of Stroke Patients following an Inpatient Rehabilitation Admission* (Poster)

**Estell J.**, Cole A., Kohler F., Connolly C., and Renton R. *An Evaluation of the Survival Period of Cancer Rehabilitation Patients Following an Inpatient Rehabilitation Admission.* (Poster)

**Estell J.**, Kohler F., Connolly C., and Renton R. *An Evaluation of the Survival Period of Patients Following an Inpatient Rehabilitation Admission.* (Poster)