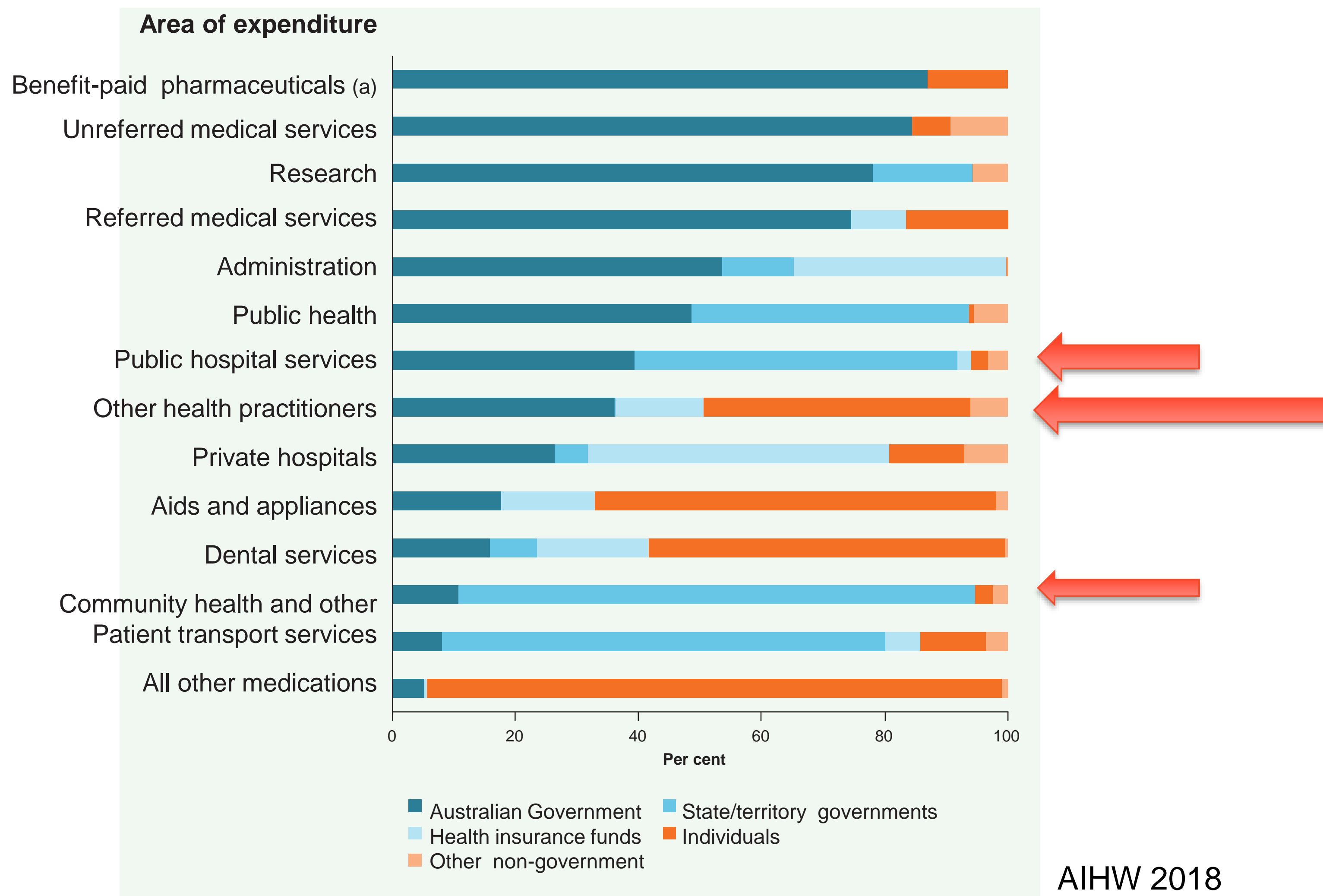
Evidence for the value of allied health

Professor Kathryn Refshauge

THE UNIVERSITY OF SYDNEY

Proportion of health expenditure, by source of funds and area of expenditure, 2015–16



AIHW 2018

Demonstrating the Value of
Allied Health Care in
SA Health

Quantifying the inputs and ou
Allied Health interventions to
overall value to the healthca

Febr

Public – I4-A1
Office for Professional Leadership
25 February 2015

A review of allied health workforce
models and structures

A report to the Victorian Ministerial Advisory
Committee for Allied Health

Prepared by
- Prof James Buchan, Consultant
- Ms Deborah Law, Consultant

1

A realist review of allied health management in Queensland Health: what works, in which contexts and why

Jessica Dawber, Natasha Crow, Julie Hulcombe & Sharon Mickan

July 2017

Why do we need evidence of our value?

- Persuade institutions NOT to cut allied health first in tight budgetary conditions
- Persuade institutions to increase staff
- Increase facilities
- Commence new services
- Convince insurance companies, MBS etc to include adequate allied health

Data and types of evidence to prove our value

Level I: Meta-analysis and systematic reviews from RCTs

- + cost effectiveness analysis
- + impact

Level II: RCTs – including new directions

Levels III-VI: Studies using non RCT methods

Level VII: Clinical data/wisdom and observations

Depends on the question

OA knee and hip

Strong recommendations for the intervention

Intervention	Recommendation	Strength of recommendation	Quality of evidence
Land-based exercise – Knee	We strongly recommend offering land-based exercise for all people with knee OA to improve pain and function, regardless of their age, structural disease severity, functional status or pain levels Exercise has also been found to be beneficial for other comorbidities and overall health We strongly recommend walking, muscle-strengthening exercise, and specifically, Tai Chi Clinicians should prescribe an individualised exercise program, taking into account the person's preference, capability, and the availability of resources and local facilities. Realistic goals should be set. Dosage should be progressed with full consideration given to the frequency, duration and intensity of exercise sessions, number of sessions, and the period over which sessions should occur Attention should be paid to strategies to optimise adherence. Referral to an exercise professional to assist with exercise prescription and provide supervision either in person or remotely may be appropriate for some people	Strong for recommendation (all land-based exercise, walking, muscle-strengthening exercise, Tai Chi)	Low (all land-based, Tai Chi) Very low (walking, muscle-strengthening exercise)
Land-based exercise – Hip	We strongly recommend offering land-based exercise for all people with hip OA to improve pain and function, regardless of their age, structural disease severity, functional status or pain levels Exercise has also been found to be beneficial for other comorbidities and overall health The type of exercise that is most beneficial is not yet known. Clinicians should prescribe an individualised progressive exercise program, taking into account the person's preference, capability and the availability of local facilities. Realistic goals should be set. Dosage should be progressed with full consideration given to the frequency, duration and intensity of exercise sessions, number of sessions, and the period over which sessions should occur The clinician should monitor the person's response to the exercise program, and could try a different form of land-based exercise if improvements are not evident. Attention should be paid to strategies to optimise adherence. Referral to an exercise professional to assist with exercise prescription and provide supervision either in person or remotely may be useful for some people	Strong for recommendation (when combining all studies of land-based exercise)	Moderate (land-based)
Weight management – Knee and/ or hip	We strongly recommend weight management for people with knee and/or hip OA. For those who are overweight (BMI ≥25 kg/m²) or obese (BMI ≥30 kg/m²), a minimum weight loss target of 5–7.5% of body weight is recommended. It is beneficial to achieve a greater amount of weight loss given that a relationship	Strong for recommendation	Very low

RACGP. Guideline for the management of knee and hip osteoarthritis, 2018.

OA knee and hip

Strong recommendations for the intervention

Intervention	Recommendation	Strength of recommendation	Quality of evidence
Land-based exercise – Knee	We strongly recommend offering land-based exercise for all people with knee OA to improve pain and function, regardless of their age, structural disease severity, functional status or pain levels Exercise has also been found to be beneficial for other comorbidities and overall health We strongly recommend walking, muscle-strengthening exercise, and specifically, Tai Chi	Strong for recommendation (all land-based exercise, walking, muscle-strengthening exercise, Tai Chi)	Low (all land-based, Tai Chi) Very low (walking, muscle-strengthening exercise)
Land-based exercise – Hip	We strongly recommend offering land-based exercise for all people with hip OA to improve pain and function, regardless of their age, structural disease severity, functional status or pain levels Exercise has also been found to be beneficial for other comorbidities and overall health	Strong for recommendation (when combining all studies of land-based exercise)	Moderate (land-based)
Weight management – Knee and/ or hip	We strongly recommend weight management for people with knee and/or hip OA. For those who are overweight (BMI ≥25 kg/m^2) or obese (BMI ≥30 kg/m^2), a minimum weight loss target of 5–7.5% of body weight is recommended. It is beneficial to achieve a greater amount of weight loss given that a relationship	Strong for recommendation	Very low

RACGP. Guideline for the management of knee and hip osteoarthritis, 2018.

Systematic reviews + RCT + impact:

Pulmonary rehabilitation

Patient Reasons

- Improves quality of life
- Increases functional capacity
- Keep well and out of hospital

(all Level 1 evidence: Cochrane Reviews)

Health Budget reasons

- Reduces hospitalisations (Level 1 evidence)
- Reduces inpatient bed days
- Reduces mortality if commenced after a hospitalisation (Level 1 evidence)
- Reduces healthcare costs (Level 2 evidence)

Jenny Alison et al 2015

Acute episode of COPD

Public

$4,500
4.5 days

Private

$7,700
7.7 days

AIHW 2012

Pulmonary Rehabilitation: Cost Effective Solution

Pulmonary
Rehab

≈ $550
16 visits

Public

$4,500
4.5 days

Alison et al 2015

Post Hospitalisation for COPD

- If attend Pulmonary Rehab = 16% readmission
- If do not attend Pulmonary Rehab = 40% readmission
- NNT 4 to avoid 1 hospital admission
- Saving $2,380 (public) - $5,580 (private)

Cochrane Review of RCTs

Stable COPD:

- NNT 6 to avoid 1 hospital admission
- Saving $1,320 (public) - $4,520 (private)

Alison et al 2015

Submitted to MBS review

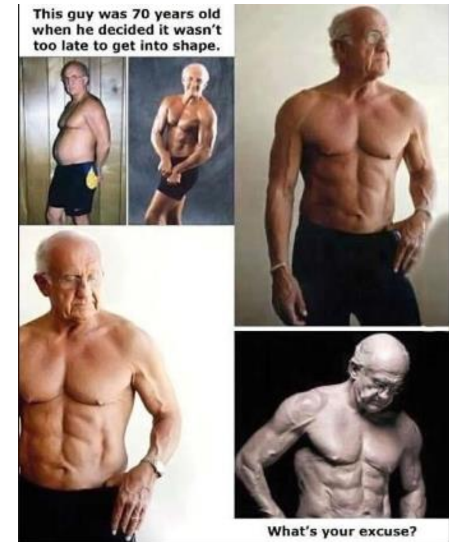
– Not included

"MSAC considered that PR programs may best be offered under the existing MBS items for chronic disease management (CDM). As a complex intervention combining exercise and psychological aspects, PR may be similar to cardiac rehabilitation programs or back pain management programs, where it is not always known which components of the package are the most effective. CDM items allow access to a range of allied health providers, capped at 5 visits per calendar year. MSAC noted that including PR in CDM items would result in no net cost to government."

RCTs + cost effectiveness + impact
Falls prevention

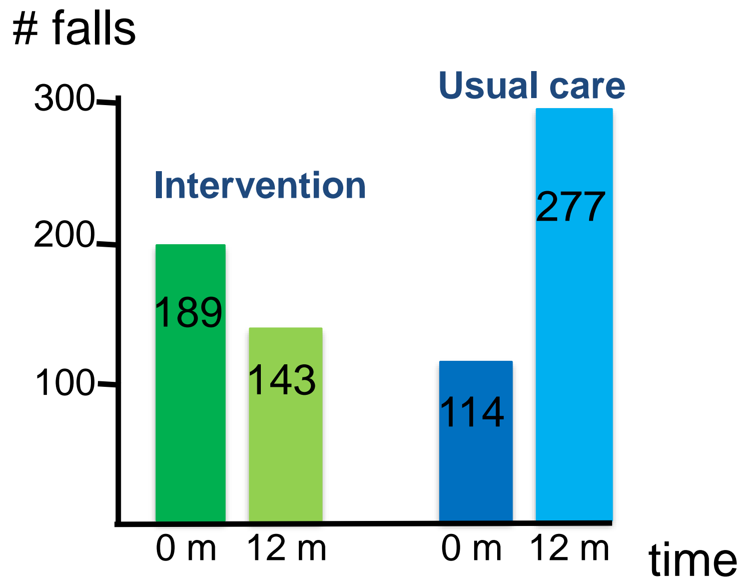
- ✓ Total dose of exercise – 50 hours minimum
- ✓ High level balance work
- ✓ Strength work for those who are deconditioned

  (2-3 sets, 10-15 reps)
- ✓ All exercises individually upgraded – progressed
- ✓ Close supervision – to allow for safe inclusion of high level balance work
- ✓ Maintenance program continued after initial conditioning phase
- ✓ Walking program (while beneficial for other health conditions) should not be considered a falls prevention program

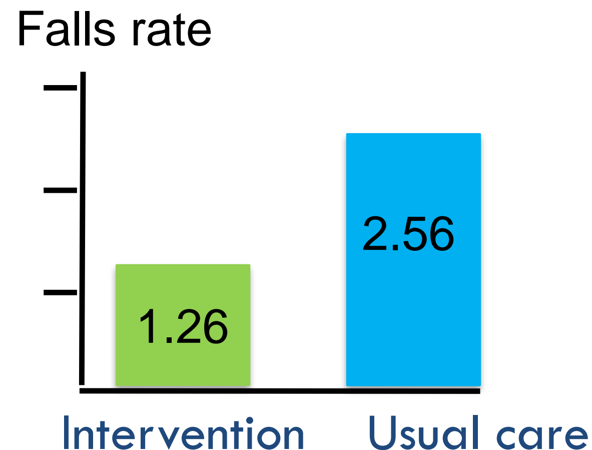


Sherrington et al 2011, Tiedeman et al 2011

Number of falls
(N= 221, mean age 85 y.o.)



Hewitt et al 2018



Cost-effectiveness:

$670 per fall avoided

Estimated cost benefit = $120M

Hewitt et al 2019

Impact: Quality of life, independence, funding

Included in Revised Aged Care Funding Instrument
July 2020

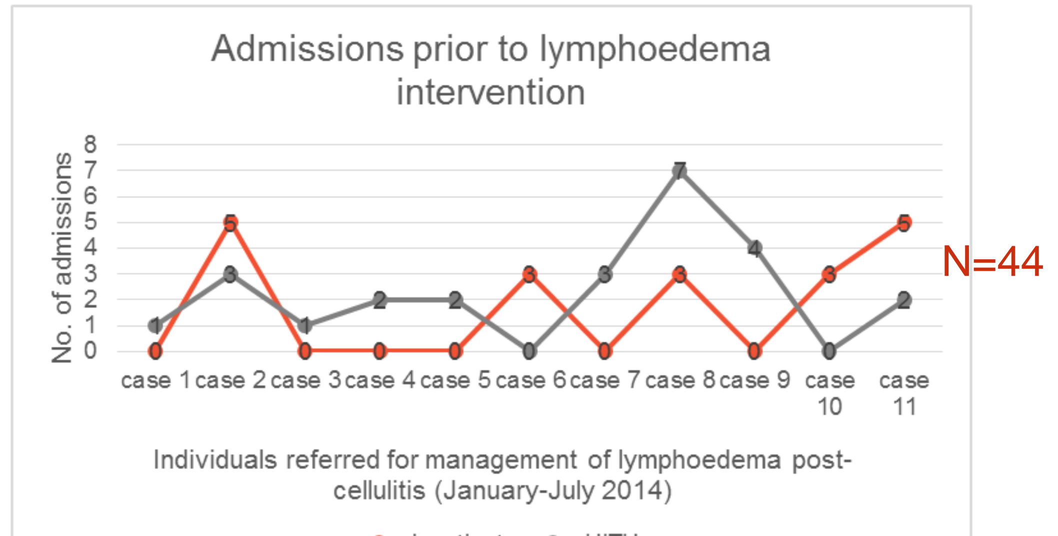
Hewitt et al 2018

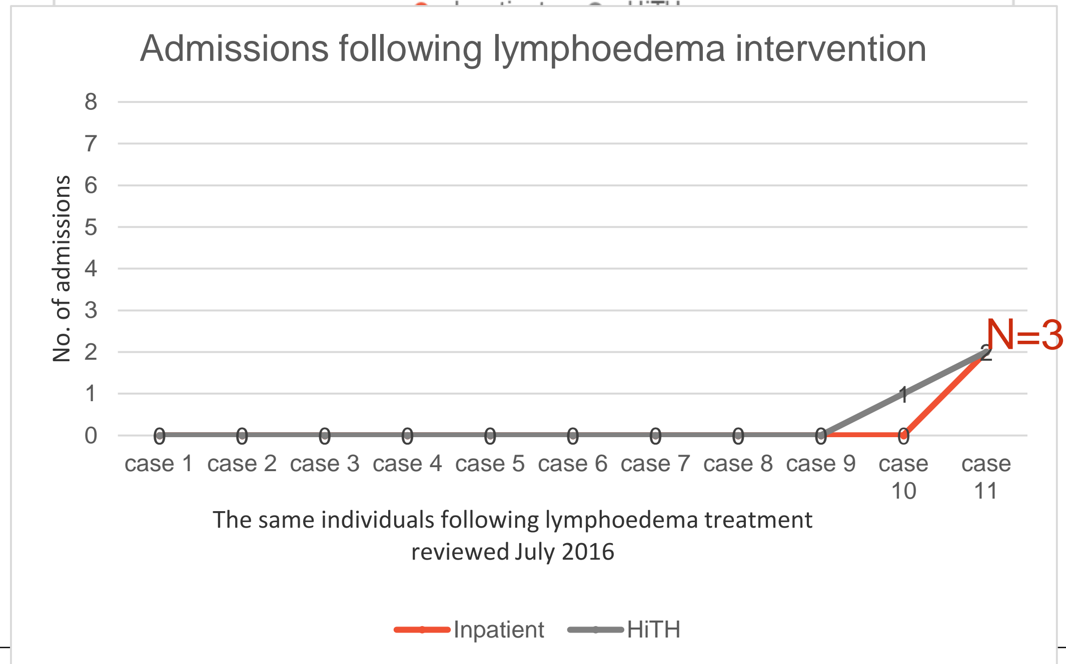
RCTs: Effective treatments are not necessarily put into practice

- ~560,000 new articles published each year
- 20,000 new RCTs registered each year.
  - i.e. 1500 new articles per day
  - 55 new trials per day
- A review of 80 studies of clinically important AND effective treatments found that clinicians could put the intervention into practice in only half of cases (Glasziou *BMJ* 2010)
- Worldwide >US$100 billion p.a. invested in research
- >66% invested in basic science research (in UK)
- <10% on evaluation of treatments

Clinical observation

Lymphoedema-related cellulitis treatment

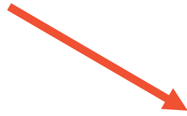




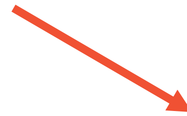
Robyn Sierla 2017

Clinical observation: Early intervention

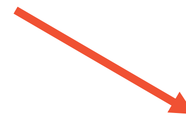
Speech disorder



Learning difficulty



Bullying – mental health problems – leave school

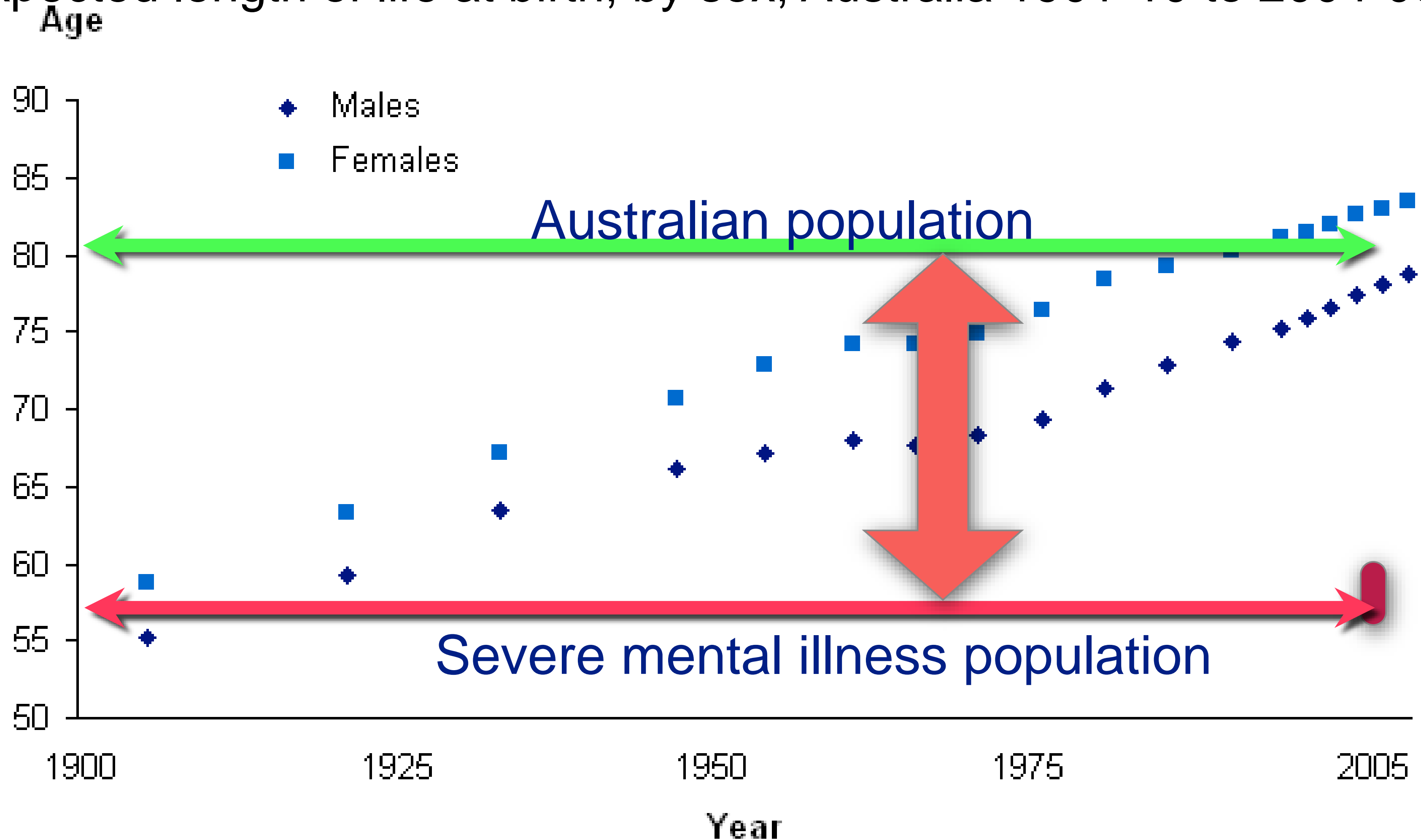


Incarceration

Logic

The longevity gap

Expected length of life at birth, by sex, Australia 1901-10 to 2004-06

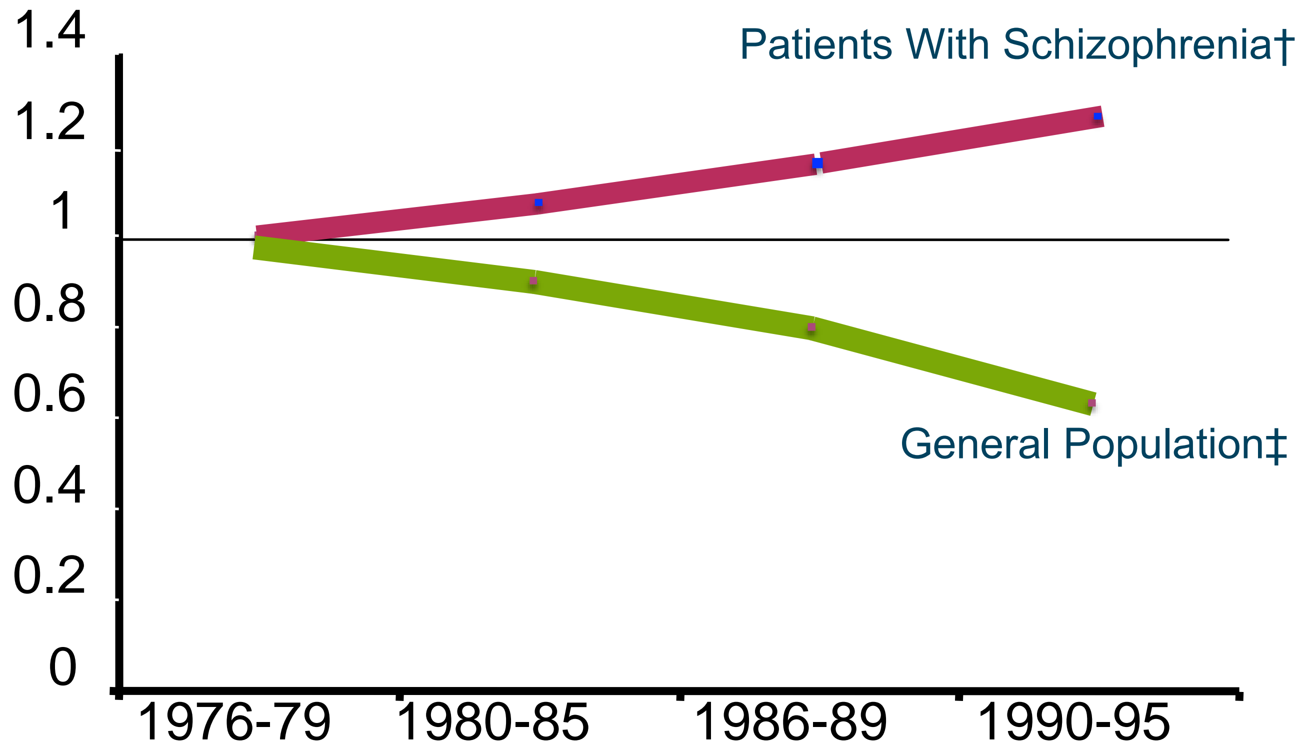


Sources: ABS Cat No. 3302.0; ABS Cat. No. 3105.0.65.001 (green line); the age of death in schizophrenia imputed from literature (ibid)

Collaborative Centre for Cardiometabolic Health in Psychosis

© Tim Lambert 2010-2016

Trends in CVD mortality rates



***Period of reference, 1976-1979.**

†Controlling for age at first diagnosis & years of follow-up.

‡Standardized by gender & age distribution of the patients.

Osby U, Correia N, Brandt L, Ekbom A, Sparen P. Mortality and causes of death in schizophrenia in Stockholm county, Sweden. Schizophr Res. 2000;45:21-28.

Saha S, Chant D, McGrath J. A Systematic Review of Mortality in Schizophrenia: Is the Differential Mortality Gap Worsening Over Time?. Arch Gen Psychiatry. 2007;64(10):1123-1131.

Collaborative Centre for Cardiometabolic Health in Psychosis

© Tim Lambert 2010-2016

https://arrivals.ambulance.nsw.gov.au/dashboard
Ambulance Arrivals Board | ...
Home - Community Heal... Google

NSW Ambulance

Data Latency: 31s Logout

Western Sydney LHD | Auburn | Blacktown | Cumberland | Mount Druitt | Norwest Private | Westmead

Western Sydney LHD

ENROUTE

Car	Incident	Destination	Distance	ETA
1339	10984	Blacktown	2.3 km	2 mins
1333	10919	Blacktown	<1 km	<2 mins

ARRIVALS

Car	Incident	Hospital	Waiting Time
1962	11007	Blacktown	00:04:43
1348	11035	Westmead	00:09:50
1307	10970	Blacktown	00:12:27
1336	11003	Auburn	00:13:52
1311	10994	Blacktown	00:16:24
1364	10954	Westmead	00:32:13
1988	10890	Norwest Private	00:35:45

MEDICAL BOOKINGS

Destination listed may only be indicative of nearest hospital.

3:38 PM 05/07/2019

https://arrivals.ambulance.nsw.gov.au/dashboard
Ambulance Arrivals Board | ...
Home - Community Heal... Google

NSW Ambulance

Data Latency: 28s Logout

Destination listed may only be indicative of nearest hospital.

Priority	From	Destination / Catchment	Status	
2A Emergency 30min	Opal Blacktown	Blacktown	Waiting	More Info
2A Emergency 30min	Walters Rd Medical Centre	Blacktown	Waiting	More Info
2A Emergency 30min	Medical Centre	Blacktown	Waiting	More Info
2B Emergency 60min	Marco Polo Aged Care Unanderra (nh)	Blacktown	On Scene	More Info
2BHE Emergency HAC/ECP 60min	St Hedwig Village Nh	Blacktown	Waiting	More Info
2 Immediate	Parramatta	Westmead	Waiting	More Info
R3 Time Critical	Campbelltown Hosp	Westmead	Waiting	More Info

Car	Incident	Hospital	Waiting Time
1988	10890	Norwest Private	00:36:21

DELAYED AVAILABLE

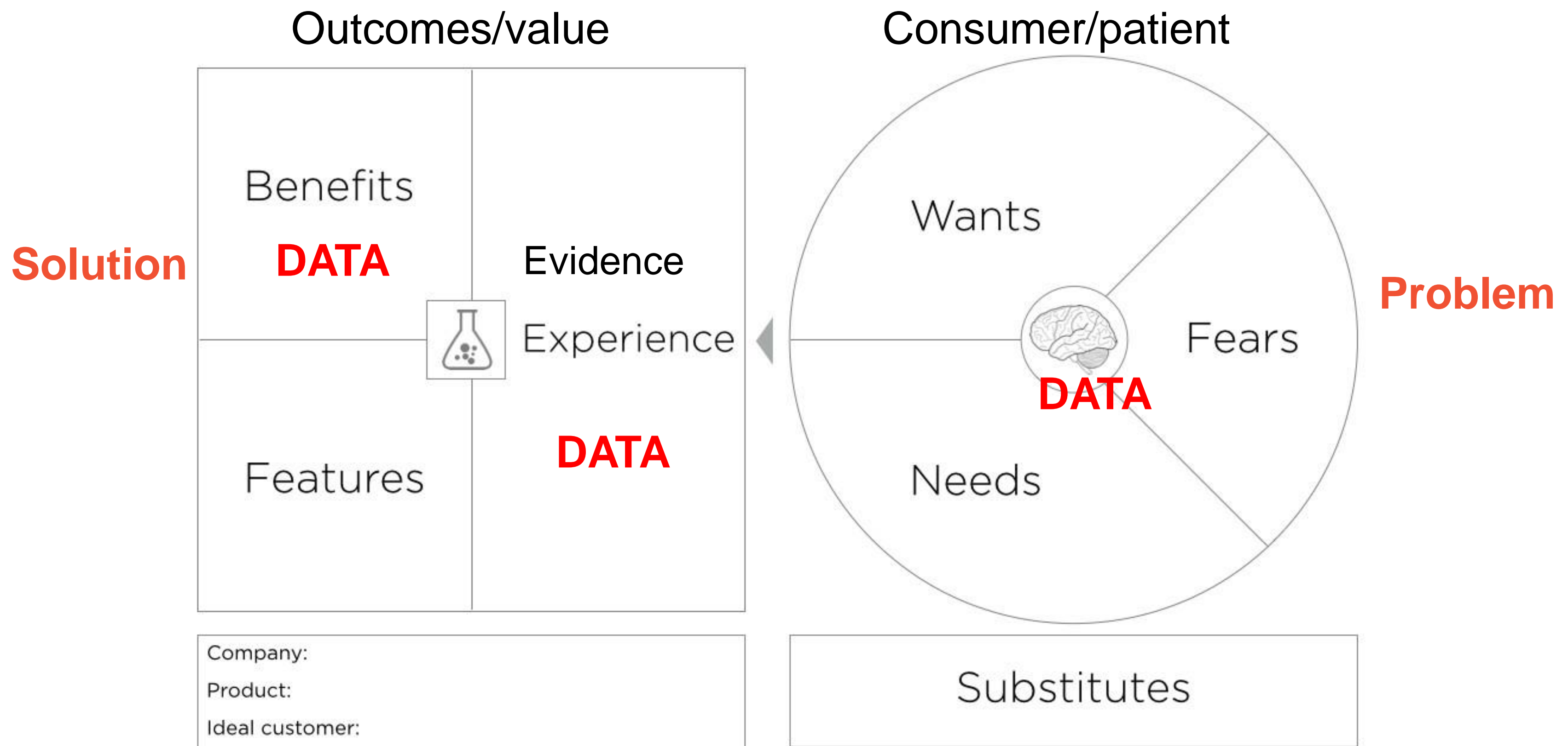
Car	Incident	Hospital	Elapsed Time
1311	10994	Blacktown	00:00:43
1353	11000	Mount Druitt	00:03:00
1308	10951	Cumberland Override	00:11:18

3:38 PM 05/07/2019

Residents of aged care facilities

At any one time, up to 80% of ambulances are bringing residents of residential aged care facilities to hospital for "feeling unwell"

Value proposition



What can you do to forge the future?

- Know how to make and "pitch" a value proposition - **DATA**
- Collect data to objectively evaluate your work/demonstrate your value
- Have a vision and a strategic direction that will benefit the institution/patients/community
- Have a research perspective
- Have a voice
- Be a leader, whatever your role

- Argue for a Chief Allied Health Officer

Far better an approximate answer to the right question, than the exact answer to the wrong question, which can always be made precise....

Tukey J 1963