

Medical (Geriatric multidisciplinary) workforce – keeping people in home

Nisal Gange

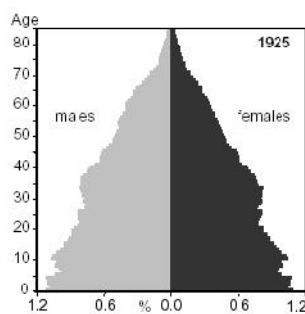
-Director Geriatrics, Adult Rehabilitation and Stroke Services (GARSS)

1 October 2015

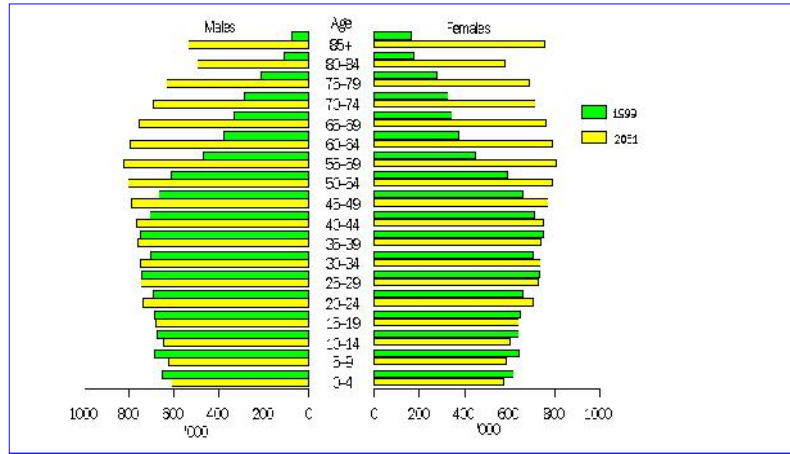
From Pyramid to Coffin

Changing Age Structure of the Australian Population

Source: Productivity Commission 2005

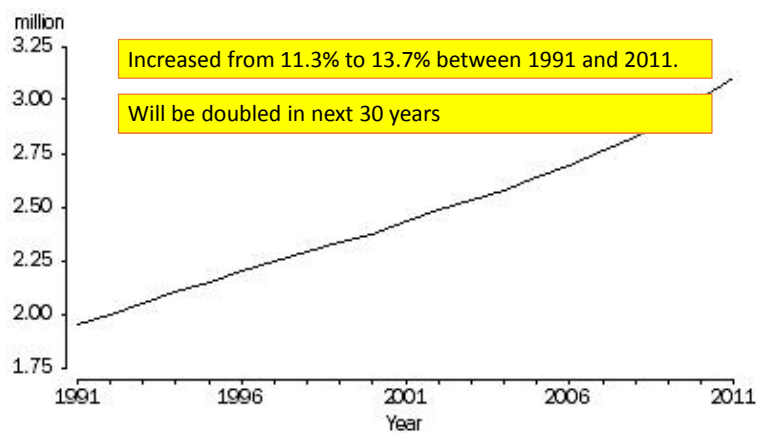


Population projections



ABS Labour force projections 3222.0

Population Aged 65 Years and Over

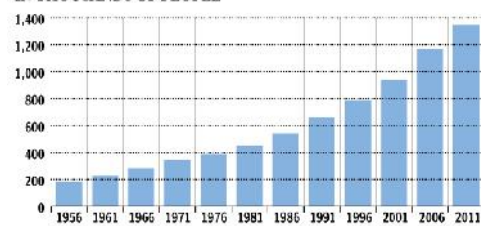


AGED 85 YEARS AND OVER

- Over the past two decades, this group increased by 169%, compared with a total population growth of 31% over the same period

NUMBER OF PERSONS AGED OVER 80 IN CANADA

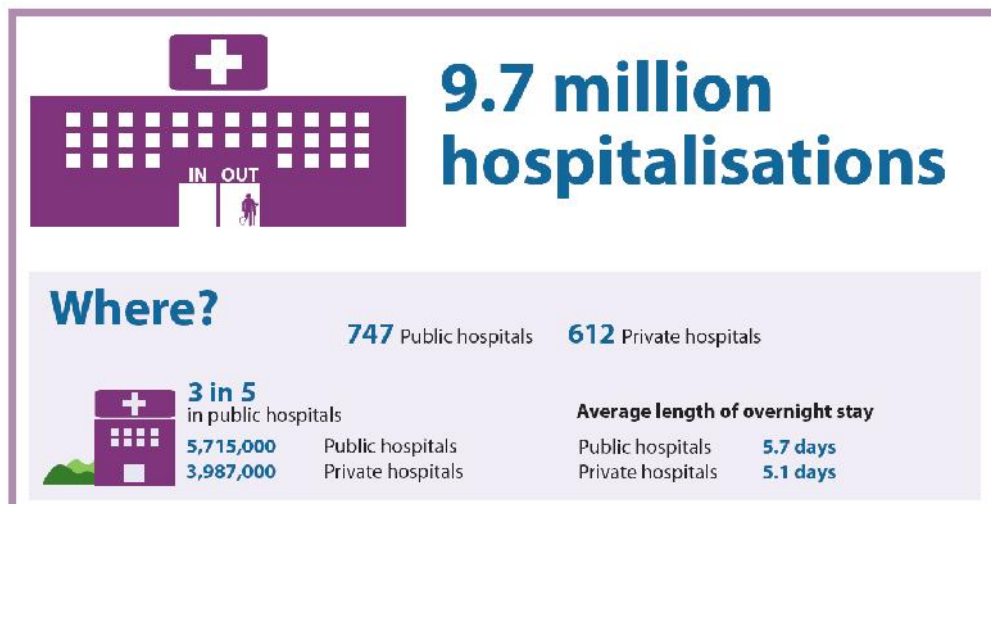
IN THOUSANDS OF PEOPLE



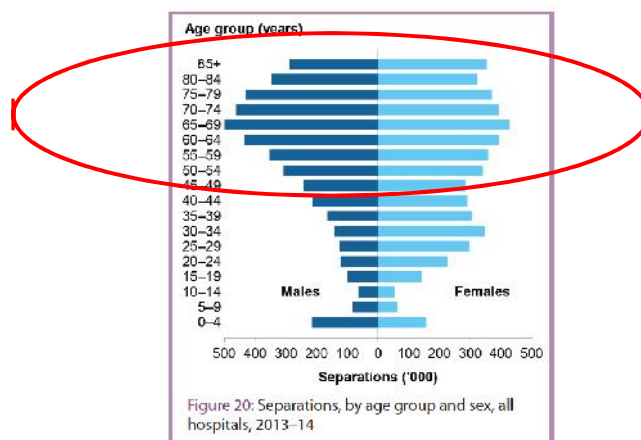
SOURCE: STATISTICS CANADA

NATIONAL POST





Hospital admissions main consumers



Average length of stay (days)

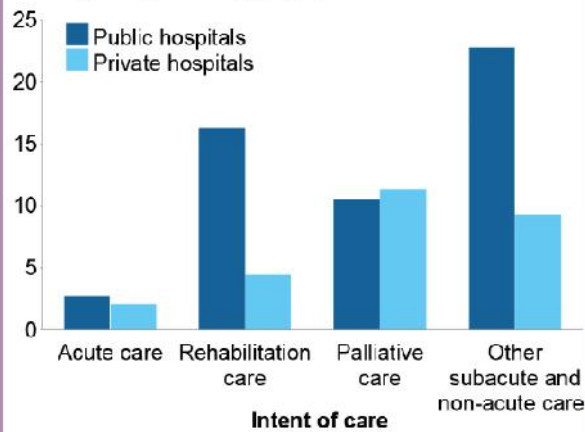


Figure 17: Average length of stay (days) by care type, public and private hospitals, 2013–14

Darling Downs Hospital and Health Service (DDHHS)

90,000 square kilometres

Total Population approx.
300,000

17 Hospitals

Six residential aged care facilities located at Dalby, Miles, Toowoomba, Oakey, Warwick, Wondai



2006 - over the age of 65
36,000

2031 - over the age of 65
84,500 (2.34 fold increase)

Innovative vision



Innovative action



Intellectual instability

Geriatric Giants



Iatrogenic disorders (polypharmacy)



Instability



Immobility



Incontinence

Case 1 Mrs C

- Known IHD,, OA of knees
- Presented To ED with fall – Fracture neck of the femur
- 3 similar falls within 4 months- outpatient assessment
- Cannot specify the circumstances of the fall
- On Aspirin, Metoprolol 25 mg BD, Amlodipine 10mg, Indapamide 2.5mg



Falls Why important ?

- **High incidence:**
 - 30% of those over 65 report a fall each year
 - Rises to 60% of those in care homes
- **Sometimes fatal:**
 - 85% of deaths due to accidents at home are caused by falls in those over 65
- **Psychological impact:**
 - Fear of falling is greater than being robbed!
- **Expensive:**
 - \$498 million dollars per annum to Australian health system

Are elderly falling because of their age??



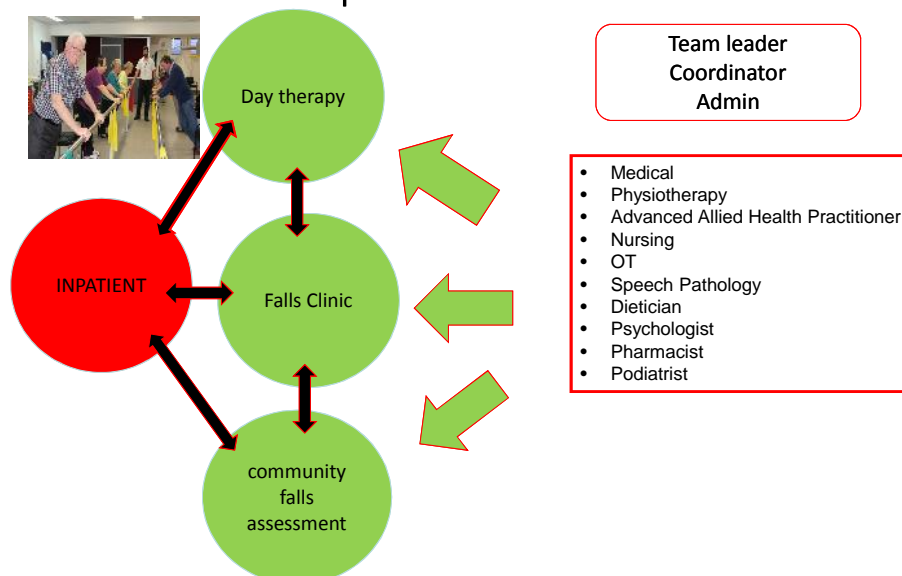
Risk factors for falls

Risk factor	Relative risk ratio/Odds ratio
Muscle weakness	4.4
History of falls	3.0
Gait deficit	2.9
Balance deficit	2.9
Walking aid use	2.6
Visual deficit	2.5
Arthritis	2.4
Impaired ADL	2.3
Depression	2.2
Cognitive impairment	1.8
Psychoactive drugs	1.7
Age >80	1.7

Geriatrician
 CNC
 OT
 Physiotherapist
 Psychologist
 Pharmacist
 Dietician
 Podiatrist

AGS et al. J Amer Geriatr Soc 2001

Falls prevention model



Advanced Allied Health Practitioner

Rapid Response Service

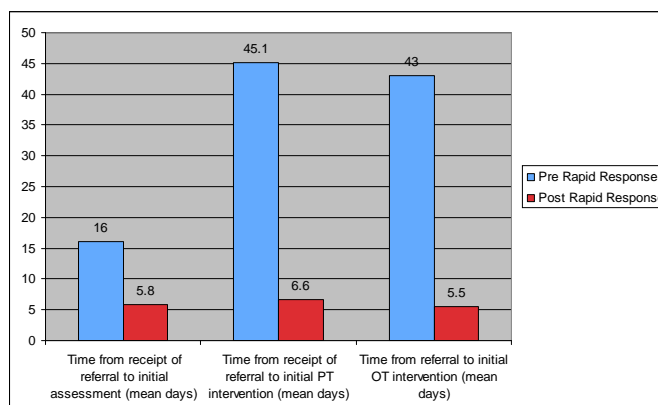
Transdisciplinary Practice: AAHP holds competencies across multiple Allied Health disciplines and provides a 'one-stop shop' for Allied Health rapid assessment, intervention and treatment planning.

Expert consultancy service with specialist skills for most complex of patients



AAHP community model of care Audit

AAHP Rapid Response Service for high risk of harm or admission – mostly elderly fallers



Multidisciplinary home assessment

**There are
14 dangerous things
in this picture**



Can you spot all of them?

Polypharmacy

- Use of more than 5 prescribed regular drugs



“If medication related problems were ranked as a disease, it would be the fifth leading cause of death in the western world!”

*Beers MH. Arch Internal Med. 2003

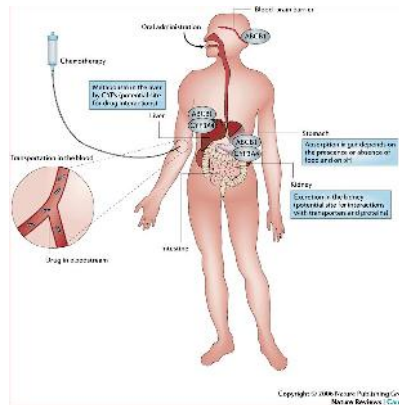
Polypharmacy- The aging Imperative

- Persons aged 65y and older constitute 13% of the population and purchase 33% of all prescription medications
- By 2040, 25% of the population will purchase 50% of all prescription drugs



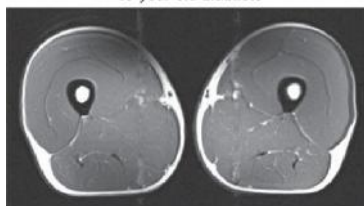
Unique Pharmacokinetics: normal part of the aging process

- Absorption
- Distribution
- Metabolism
- Excretion

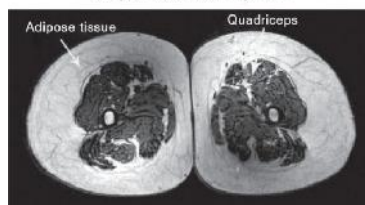


- In elderly all these mechanisms are defective

40-year-old triathlete



74-year-old sedentary man



Benzodiazepines for example

- Half-life (T_{1/2}) of diazepam (Valium) is the patient's "age, in hours"
 - 25-year old = 25 hours
 - 75-year old = 75 hours
- Use of a long-acting BZ in the geriatric patient is not recommended.
- Shorter-acting benzodiazepines should be used in the elderly (temazepam, oxazepam, lorazepam)

27

Case 2

80 year old retire teacher

Has been managing well until 6 months back

PMH -OA, Hypertension

On Amlodipine 5mg, Ramipril 10mg, Naproxen 500 mg BD,

Aspirin 100mg, paracetamol 1 g qds

Feeling tired and dizzy

Had 4 falls

BP 100/70 when standing 80/60

Clinician led home visit arranged.

Medication review

- Red flag drugs
- Amlodipine 5mg, ←
- Ramipril 10mg, ←
- Naproxen 500 mg BD, ←
- Aspirin 100mg, ←
- Paracetamol 1 g qds

Investigations

- Hb-65, u -15, Cr -450

Management

- Stopped all meds
- Transfused 4 units
- Just continued on Amlodipine and PCM

Nursing home admissions to hospital- facts

- Nursing home residents are known have a significant increased ED admissions compared to similar age group in the community¹
- This group has a significant in hospital mortality (20%) and a further 16% makes no improvement with hospital care².
- Of the patients who are discharged after inpatient care a further 20% die within 3 months³.

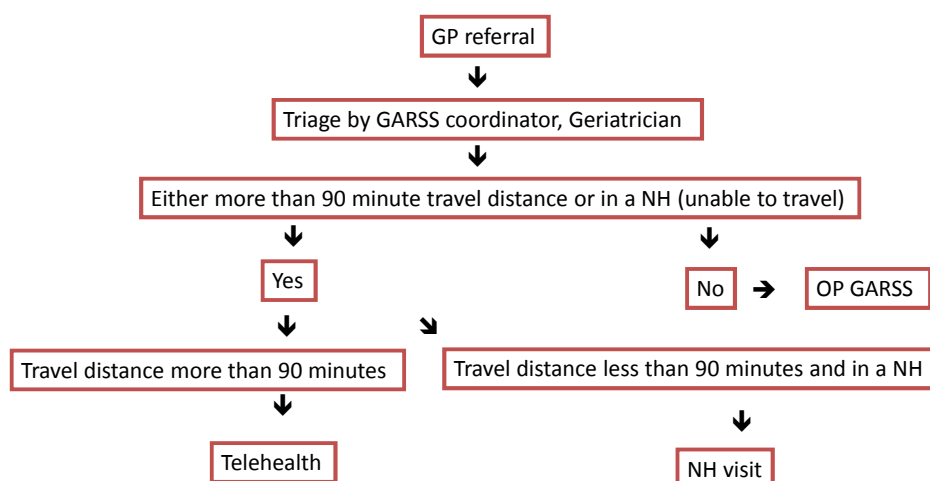
Nursing home admissions to hospital- facts

- One study identified 75% of nursing home admissions were done without a review or a discussion by a primary care physician³.
- Lack of geriatric specialist support to Nursing home staff as well as failure to organise advance health directives have been identified as the main reason for unnecessary nursing admission to hospitals³.

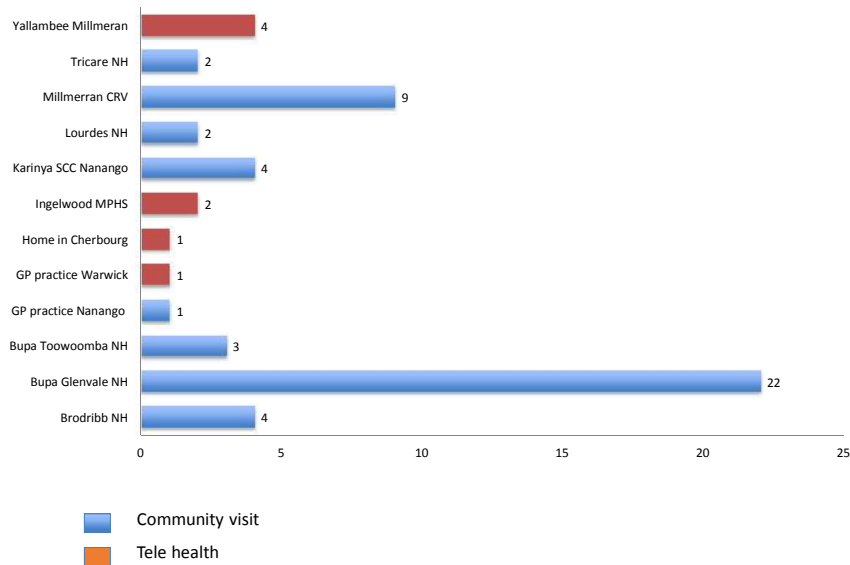
GARSS - NH visits/ Telehealth clinic – commenced Aug 2013

- Once a week session (Tuesday afternoons) Personnel involve
 - Clinical
 - Geriatrician, General practitioner (GP), Geriatric CNC , NH staff
 - Admin and liaising
 - GARSS coordinator, GARSS department support officer.
 - Respective NH managers

Method



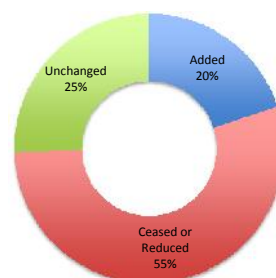
Patient location and type of review



Medication review

- All of the reviews (56) were involved in a medication review

Medication change*	number
Unchanged	14
Added	11
Ceased or reduced	30
Total	55

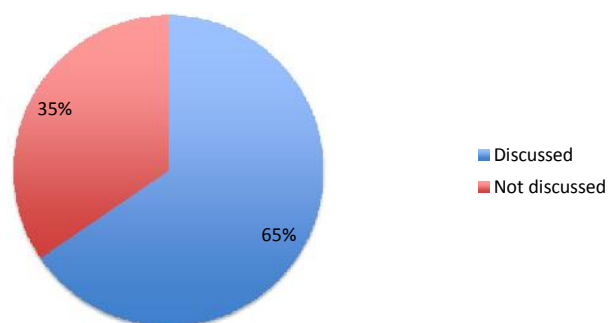


*Where medication added and taken off the net result was taken

Advanced care planning with patient or family



Advanced care planning discussed and decision made with patient or family



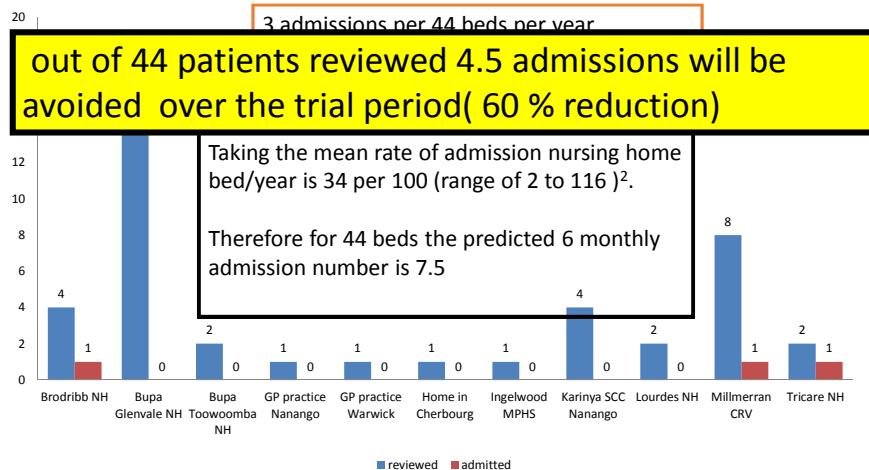
Admission to a acute hospital from care home

- The studies indicate mean rate of admission nursing home bed/year was 34 per 100 (range of 2 to 116)².
- Data from DDHS public NH- 30 per 100 per year.

Readmission to a hospital since reviewed

Review	Admission
Bupa Glensvale NH	0/18
Lourdes NH	0/2
Nanango NH	0/4
Tri care NH	1/2
Bupa Toowoomba NH	0/2
Ingelwood MPHS	0/1
Brodribb NH	1/4
Home in Cherbourg	0/1
GP Practice Warwick	0/1
GP practice Nanago	0/1
Millmerran NH	1/8
Total	3/44 (6 per year)

Admission by facility for 6 months



Background .. Usual Length of stay (LOS) After admission from a NH (NHS data)

Department	Mean LOS (days)
Medical and Geriatric	19.18
Orthopedic	10.3
Surgical (other)	4.96
Mental health	27
Total	14

Average daily ABF funding for a patient staying with DRG code of COPD (usual pattern of admission from a NH) is \$1,100

Transport cost

Total income and cost analysis for trial period (6 months)

- Direct Income

- OSR- \$22, 508 (bulk billed)

- Indirect savings

- Bed days \$ 65, 000
- Transport cost \$ 15,529

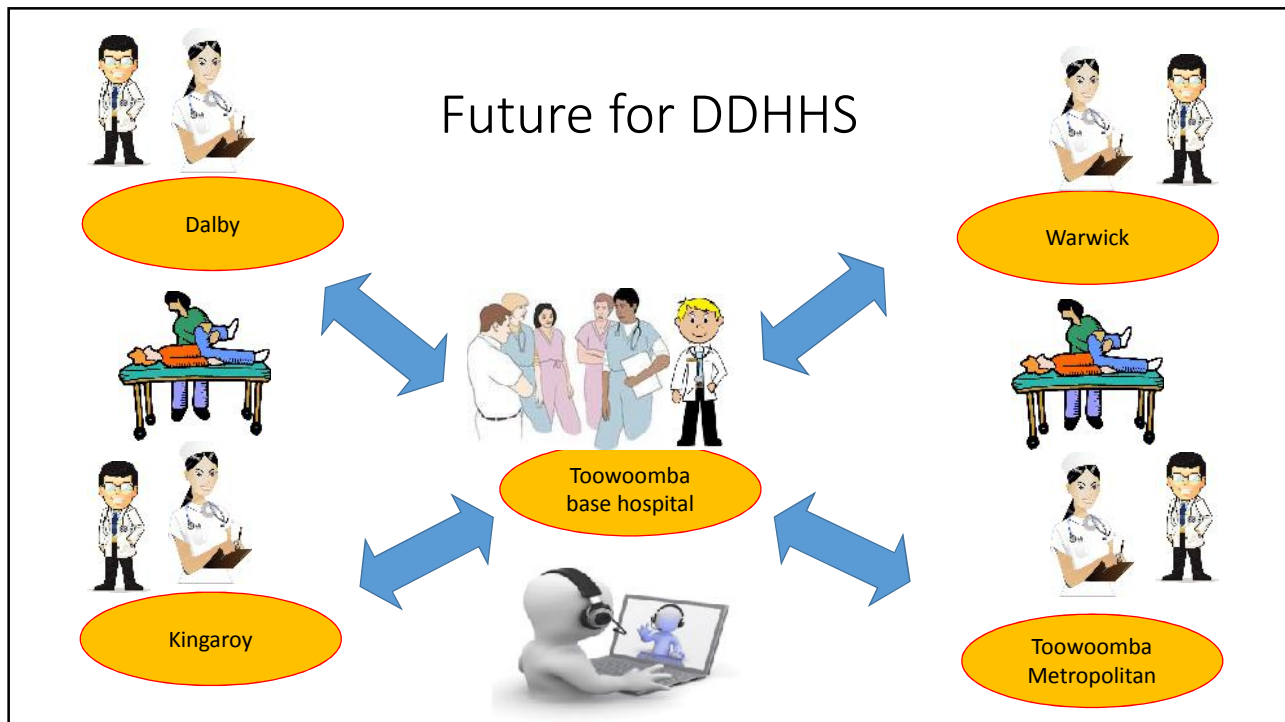
- Expenditure

- Physicians time \$ 9,500

Other benefits identified

- NH and GP satisfaction survey

- Received 7 (3 from GPs, 4 from Nurses)
 - improved outcomes for pts - 3 Strongly agree, 1 agree
 - assists GP - 3 Strongly agree, 1 agree
 - assists NH staff - 3 Strongly agree, 1 agree
 - assists families - 3 Strongly agree, 1 agree



BUSINESS CASE PROPOSAL

Expansion of Geriatric, Adult Rehabilitation and Stroke Services (GARSS) through its Phase 3 Model of Care:

- Rural Health and Aged Care
- 1 October 2015

Thank You!

