

Gold Coast University Hospital



The Changing Patient Profile

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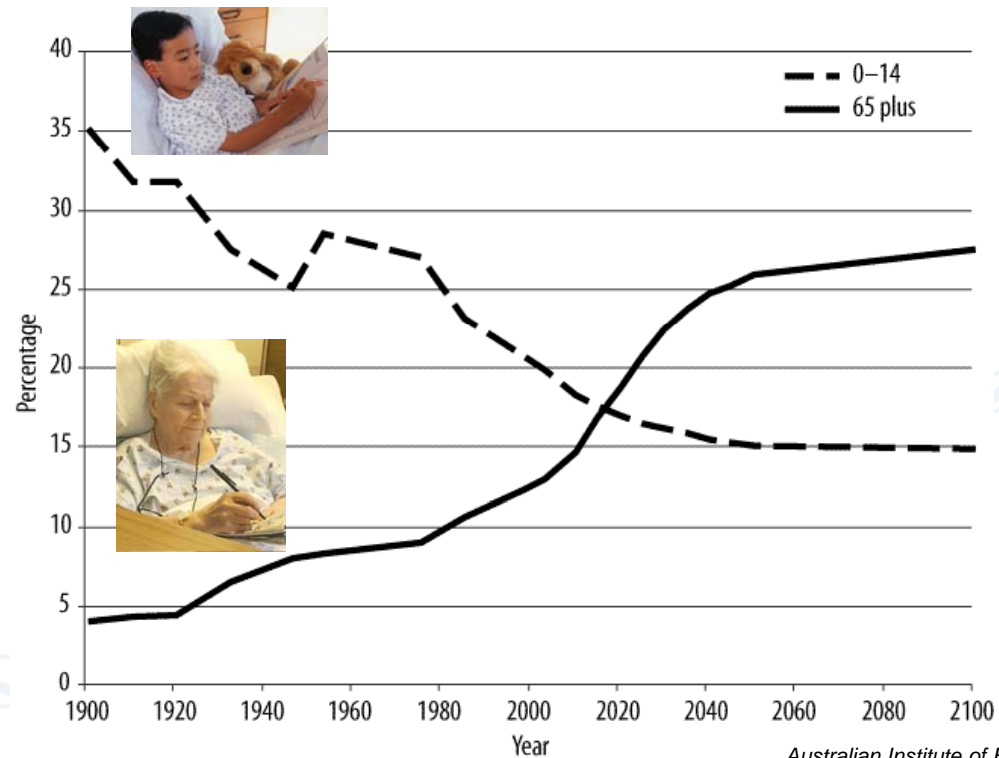
we're building a
healthier
community

What will our patients look like ?

Older
Sicker
More infections
More demanding

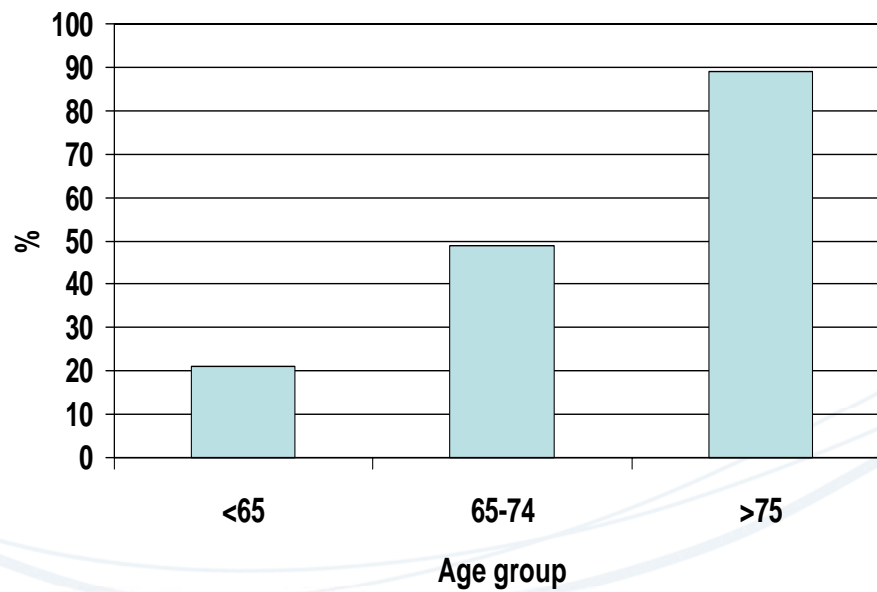


Proportion of Australian population aged under 15 and aged over 65



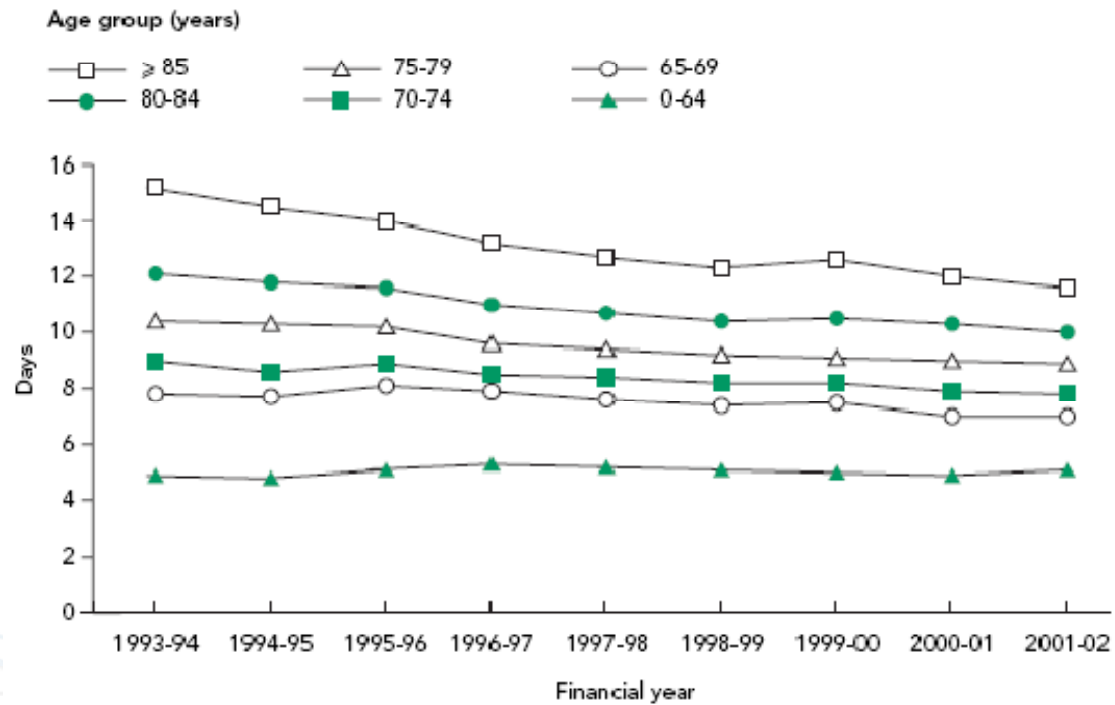
Australian Institute of Family Studies, February 2008

Change in Australian hospital admissions by age 1993/94 to 2001/02*



*Gray, Yeo, Duckett MJA 2004

Length of stay in Australian hospitals by age group*



Future trends in disease burden

AIHW 2007

Diseases of old age

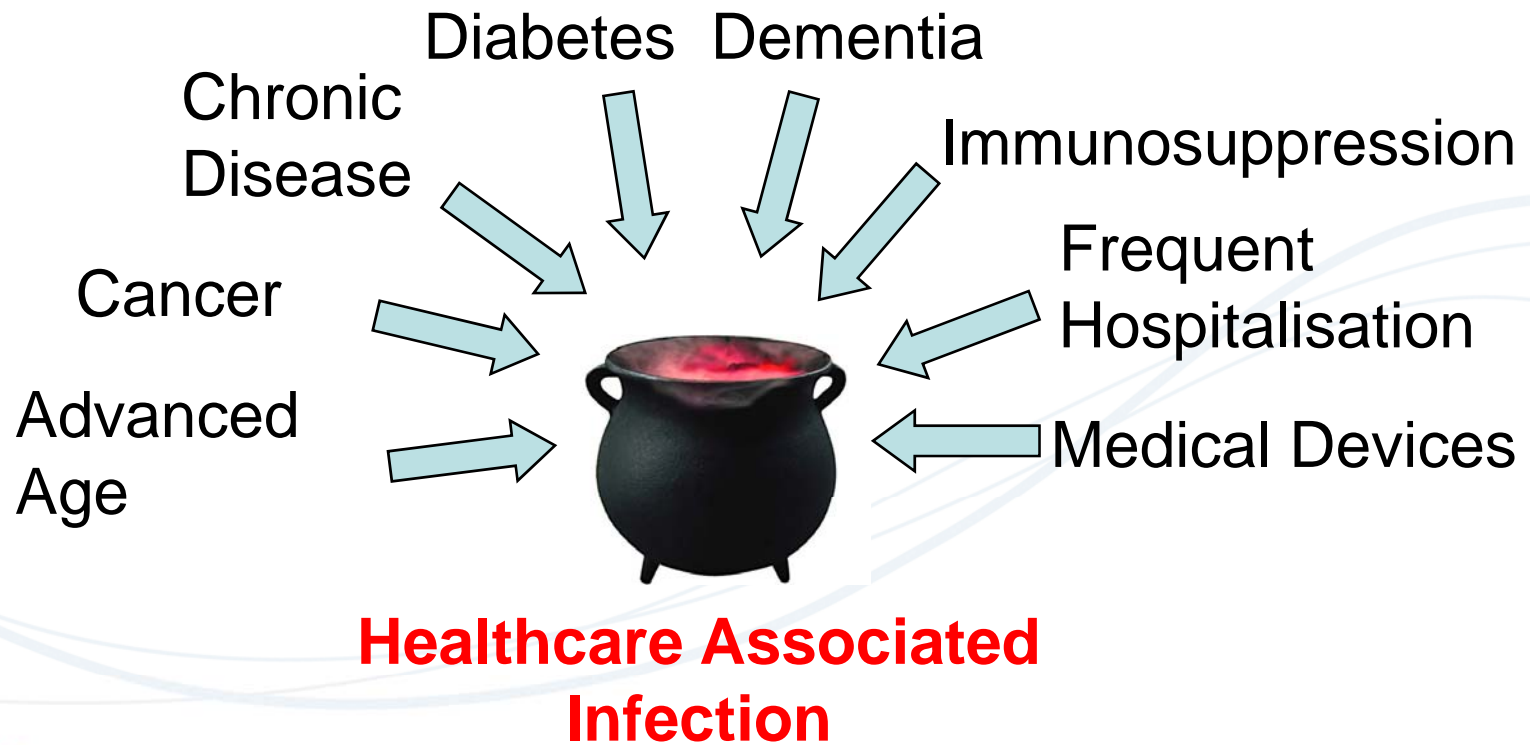
- dementia, osteoarthritis

Diabetes and its complications

- kidney disease, vascular disease

Cancer





Hospital Acquired Infection

5 - 10 % of patients admitted to hospital acquire an infection

~1:1000 admitted patients die of hospital acquired
bloodstream infection

~1: 5 000 000 risk of death from an international jet flight





Healthcare associated infection and single rooms

At least 101 studies have reported controlling MRSA infection and 38 have reported controlling VRE infection by means of active detection and isolation of colonised patients in healthcare settings*



**Farr BM. Infect Control Hosp Epidemiol. 2007 Feb;28(2) 245.*

Infectious pathogens/syndromes requiring single room isolation

Queensland Health and CDC Infection Control Guidelines




<p>Abscess – draining, major</p> <p>Bronchiolitis - children</p> <p><i>Clostridium difficile</i></p> <p>Rubella</p> <p>Acute viral conjunctivitis</p> <p>Diphtheria</p> <p>Epiglottitis – <i>Haemophilus influenzae</i> B</p> <p>Furunculosis, staphylococcal - children</p> <p>Rotavirus</p> <p>Herpes simplex – mucocutaneous, disseminated or primary, severe</p> <p>Varicella</p> <p>Incontinent patients with:</p> <ul style="list-style-type: none"> - Campylobacteriosis - Cholera - Cryptosporidiosis - Enteropathogenic O157:H7 <i>Escherichia coli</i> - <i>Giardia lamblia</i> - Salmonellosis - Shigellosis - <i>Vibrio parahaemolyticus</i> - <i>Yersinia enterocolitica</i> - Hepatitis A <p>Human metapneumovirus</p> <p>Impetigo</p> <p>Influenza</p> <p>Head lice</p> <p>Measles</p> <p>Norovirus</p> <p><i>Haemophilus influenzae</i> type b meningitis</p> <p><i>Neisseria meningitidis</i> meningitis</p> <p><i>Mycobacterium tuberculosis</i> pneumonia</p>	<p>Multidrug-resistant organisms including:</p> <p>Health care-associated multidrug-resistant <i>Staphylococcus aureus</i> (HA-MRSA) eg AUS-2, AUS-3 and UK EMRSA-15 strains</p> <p>Panton–Valentine leukocidin (PVL) positive Community-acquired multidrug-resistant <i>Staphylococcus aureus</i> (CA-MRSA) eg WA-1, QLD and SWP strains</p> <p>Vancomycin Resistant <i>Enterococcus</i> (vanA strains)</p> <p>Vancomycin Resistant <i>Enterococcus</i> (vanB strains)</p> <p>Penicillin-resistant <i>Streptococcus pneumoniae</i></p> <p>Heterotrophic-Vancomycin Intermediate <i>Staphylococcus aureus</i></p> <p>Extended-spectrum beta-lactamase producing <i>Klebsiella pneumoniae</i> and <i>Escherichia coli</i></p> <p>Carbapenem-resistant <i>Acinetobacter baumannii</i></p> <p>Mumps</p> <p><i>Mycoplasma pneumoniae</i></p> <p>Parainfluenza virus - children</p> <p>Parvovirus B19</p> <p>Pediculosis</p> <p>Pertussis</p> <p>Adenovirus pneumonia</p> <p><i>Burkholderia cepacia</i> in patients with cystic fibrosis</p> <p>Poliomyelitis</p> <p><i>Streptococcus</i>, Group A</p> <p>Decubitus ulcer - major</p> <p>Respiratory syncytial virus</p> <p>Rhinovirus</p> <p>Ritter's disease (Staphylococcal scalded skin syndrome)</p> <p>Rubella</p> <p>Scabies</p> <p>Severe acute respiratory syndrome</p> <p>Variola</p> <p>Endometritis (puerperal sepsis)</p> <p>Scarlet fever</p> <p>Viral haemorrhagic fever</p> <p>Wound infection - major</p>
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100 day audit of placement of patients colonised with multiresistant organisms in a hospital with 20% single rooms Gold Coast Hospital January – April 2007

Total isolation bed-day requirement*	Effective single room bed-day isolation of infectious patients (bed-days)
2470	672 (27%)

* does not include norovirus, varicella, TB etc.

National Guidelines for the provision of single room accommodation in acute general hospital inpatient units

<p>United States</p> <p>American Institute of Architects Guidelines for Design and Construction of Health Care Facilities 2006</p> 	<p>100%</p>
<p>United Kingdom</p> 	<p>50 – 100%</p>
<p>Australia</p> <p>(Australasian Health Facility Guidelines 2007)</p> 	<p>“Mix and number depend on service demand”</p>

Design challenges and the changing patient profile

Generic Inpatient Unit Special Inpatient Units

- Medical Assessment
- Infectious Diseases
- Aged Care



