

## Overview of Australian Healthcare Sector, Models of Care, Case Studies (presentation)

**Creator/Contributor:**

Carthey, Jane

**Publication Date:**

2009

**License:**

<https://creativecommons.org/licenses/by-nc-nd/3.0/au/>

Link to license to see what you are allowed to do with this resource.

Downloaded from <http://hdl.handle.net/1959.4/45593> in <https://unsworks.unsw.edu.au> on 2024-04-25



Centre for Health Assets Australasia

## IPFA: AUSTRALIA TRENDS & PRESSURES IN AUSTRALIAN HEALTHCARE PROJECTS - 19 AUGUST 2009 OVERVIEW OF AUSTRALIAN HEALTHCARE SECTOR, MODELS OF CARE, CASE STUDIES

**A/Prof Jane Carthey** - Director, Centre for Health Assets Australasia (CHAA)

Faculty of the Built Environment, University of New South Wales, Sydney, Australia



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**



# Outline

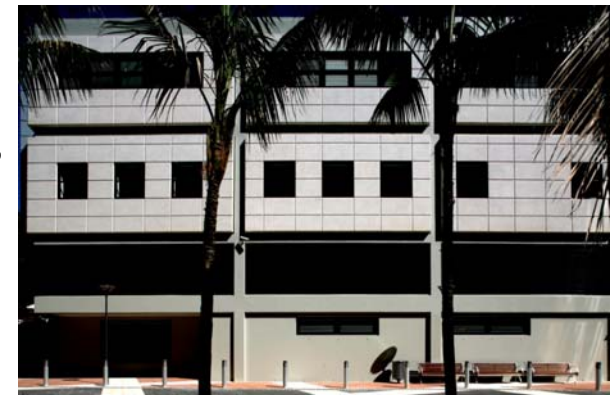
1. Emerging needs impacting our facilities
2. Who is most likely to be a patient?
3. Ageing Health Workforce
4. Emerging Technology + impact on clinical/non-clinical functions
5. Community-based facilities
6. Design Considerations
7. Rise of the 'superbug' and other nasties
8. Politics and Policy
9. Conclusions





# Emerging needs impacting our facilities

- Ageing population – patients and workforce
- Emerging technology – cost, availability,
- Consumer expectations – increasing demand
- Increasing age of existing facilities – replacement/ refurbishment?
- Need for new facilities in new areas
- Trend towards care in the community
- Increasingly tight health budgets – do ‘more with less’
- Politicisation of health – NHHRC, etc
- Rise of superbugs, possibility of pandemics e.g. swine flu, climate change illnesses, etc





## Who is most likely to be a patient?

- More likely to be 'older Australians' - 'people aged 65 years or over' (AIHW, Australia's Health, 2006)
- 13% of the population – 2,604,900 people in 2004
- Much greater use of hospitals than younger people: in 2003-04, 2.38 million or 34% of all hospital separations (Table 4.7, AIHW, 2006, 216)







# Ageing Health Workforce

*For well over two decades there have been dire warnings of a looming crisis in the health care system due to the exponential increase in the ageing population, the burden of chronic disease and significant workforce shortages. In rural areas, we are now seeing the beginnings of catastrophic health workforce shortages that without action will cripple the health care system.*

*(Amanda Kenny, Latrobe University,*

*<http://www.abc.net.au/news/stories/2009/02/02/2479976.htm>)*

- Average age of nurses now 45-50 years
- Doctor shortage especially in rural areas
- Increasing use of overseas trained doctors
- Increasing use of agency nurses – often overseas trained
- Inadequate numbers of clinicians being trained

# Emerging Technology

**Re-direction of care away from the immediate hospital setting – assisted by technology, telemedicine, remote diagnosis**

- Robot doctors
- Robotic units are being used in the US and Canada to provide consultations or ward rounds in some US hospitals. The doctor can be located in any part of the world but can still see his patients and check on their progress. A simple joystick enables navigation of the room even with obstacles

- ([http://www.nationalreviewofmedicine.com/issue/2007/06\\_15/4\\_advances\\_medicine01\\_11.html](http://www.nationalreviewofmedicine.com/issue/2007/06_15/4_advances_medicine01_11.html), 11 Oct 2007)



**Dr Mendez, Dept of Neurosurgery,  
QEII, Halifax, Canada**



# Impact of Technology on clinical and non-clinical functions

**Clinical: MRI and other technology in Operating Theatres**



[http://www.medicalimagingmag.com/issues/articles/2006-09\\_04.asp](http://www.medicalimagingmag.com/issues/articles/2006-09_04.asp)

<http://www.childrenshospital.org/clinicalservices/Site2131/mainpageS2131P0.html>



## **Boston Children's Hospital**

Architect Shepley Bulfinch and Abbott (Boston)

MRI moves in and out of the operating room as needed into a docking bay

### **Design Issues:**

- structure required to support the 7.4-ton magnet;
- containment of the fringe magnetic fields associated with the scanner within the room;
- isolation of vibration and sound;
- accommodation of adjacent spaces not typically found in ORs, such as the docking and control rooms.
- Secured entry and provisions for ease of circulation for the patient, equipment, and different types of clinicians involved in the intraoperative procedure



# Impact of Technology on clinical and non-clinical functions

## Non-clinical: Goods delivery and stores

- Automated delivery systems using robotic devices e.g. AGV hospital 'workhorses' at St Olav's Hospital, Trondheim, Norway
- Guided by lasers and microchips, run automatically to stations in the wards, using hospital lifts and corridors shared with patients and the general public.
- Can 'talk' and take themselves to a charging station when batteries run low.



010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**

Centre for Health Assets Australasia



# Community-based Facilities

## Leith Community Centre, Edinburgh Scotland

- [http://www.nhslothian.scot.nhs.uk/news/publications/Leith\\_CTC.pdf](http://www.nhslothian.scot.nhs.uk/news/publications/Leith_CTC.pdf)



Front door



Paed consult room



Public waiting area

010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**

Centre for Health Assets Australasia



# Design Considerations include:

Healing environments for patients

Good workplaces for staff

Environmental sustainability – healing the environment

Long term planning for flexibility and adaptability

Efficient use of scarce resources including money



Polyflor



010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**

Centre for Health Assets Australasia



# Design considerations – some examples

Provide an interior environment to assist - healing, stress reduction

Create designs that identify, unify or separate spaces, and add aesthetic and functional value

Use of colours, patterns and texture for practical purposes and aesthetics

Wayfinding devices for general /specific user profiles - patients with dementia

Accessibility issues



Polyflor

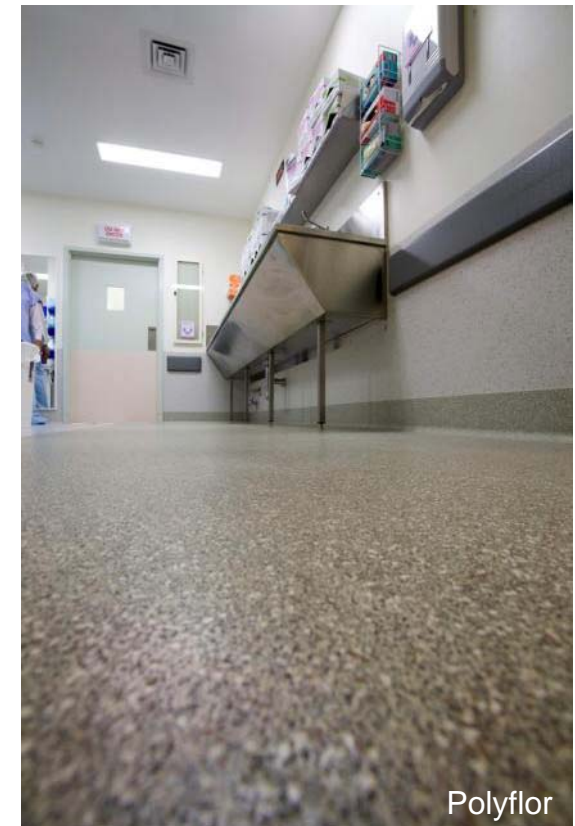


# Rise of the Superbug and other nasties we would rather avoid!

SARS, swine flu, what's next?

Increasing emphasis on design of 'safe' facilities – lower rates of adverse incidents, healthcare acquired infection (HAI), slips, trips and falls, and other injuries

Climate change related illnesses – dengue fever, Japanese encephalitis, Ross River Virus, mental health problems in rural communities, etc





010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**

Centre for Health Assets Australasia



# Politics and Policy

Garling Report, NSW, 2008 –  
the health ‘culture’

National Hospitals Health  
Reform Commission Report,  
2009

Federal – State relations –  
Healthcare Agreements

Draft Premises Standards  
Commonwealth Disability  
Access to Premises – Buildings  
(draft standards), 2009

Do more with less = efficiency  
Value for money is important

Billard Leece, RCH Amb Care Melbourne





# Conclusions

What are the issues being discussed? ACHSE-CHAA Conference held 4-7 August 2009 – program included issues such as:

- Building Bridges between Infrastructure and People: the intersection between hospitality and healthcare
- Creating and Sustaining a Performance Development Culture
- Workforce Planning in the current Economic Climate
- Vision Zero – Safe Systems, Safe Processes, Safe Buildings
- Risk Management using a Multi-media Approach
- Engaging Consumers in health care system design and reform – moving beyond the rhetoric.

Many and Varied! Thank you!



010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**



Billard Leece, RCH Melb





010101011110100100001  
0101101011100



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

**BUILT  
ENVIRONMENT**

Centre for Health Assets Australasia



# **CENTRE FOR HEALTH ASSETS AUSTRALASIA\***

## **Australasian Health Facility Guidelines Project**

**[www.healthfacilityguidelines.com.au](http://www.healthfacilityguidelines.com.au)**

### **CHAA.net subscriber network – benefits of joining?**

Regular newsletter (4 per year); information re upcoming events, resources, research, AusHFG releases and calls for reviewers. Register at CHAA website.

**Website: [www.chaa.net.au](http://www.chaa.net.au)**

**Email: [chaadmin@unsw.edu.au](mailto:chaadmin@unsw.edu.au)**

**Tel: +61 2 9385 5619 Fax: +61 2 9385 5935**

**\* We acknowledge our major supporters who include the Australasian Health Infrastructure Alliance (AHIA) and the University of NSW**