

# **Hospitals without Walls**

## **Meeting the Challenges**

## **Creating the Opportunities**

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August 2007

# The Plot

- The Challenges
  - Changing Demographics
  - Chronic Disease
  - Acute Care vs the Rest
  - Keeping up with Expectations
  - Organisation and Funding
- The Opportunities
  - Qld Statewide Health Services Plan
  - New Hospitals, New Models
- Conclusions



# **The Challenge Changing Demographics**

# Ageing of Population

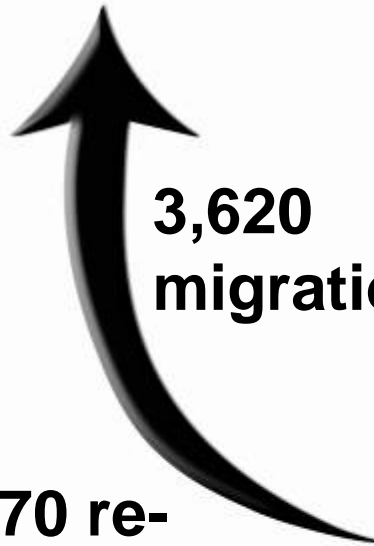
- Patients
- Disease
- Staff

# Nursing Workforce today

- **The proportion of registered nurses over 40 grew from 49.5% in 1997 to 73.4% in 2005.**
- **This trend is even more significant for enrolled nurses with 52.0% in 1997 and increasing to 82.0% in 2005.**

# Flow of RN workforce Supply 2005 to 2016

28,370 new  
grads



3,620  
migration

40,748 in 2005



37,619 loss



Net in 2016  
is 49,747

13,970 re-  
entries

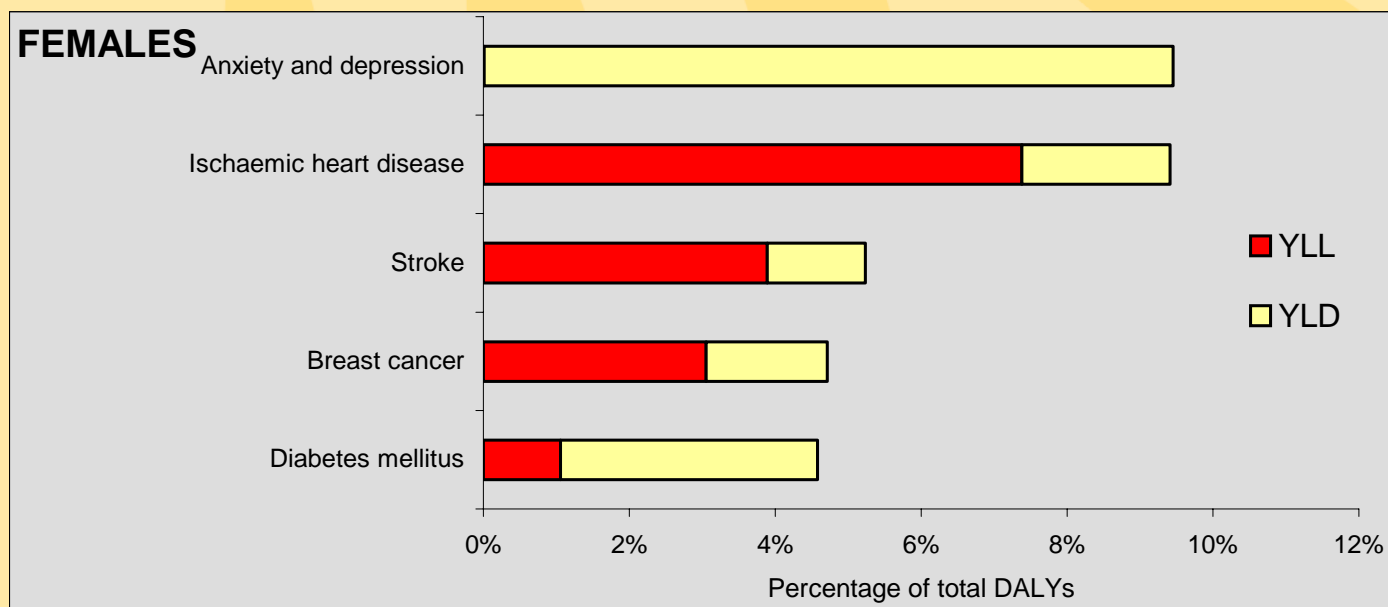
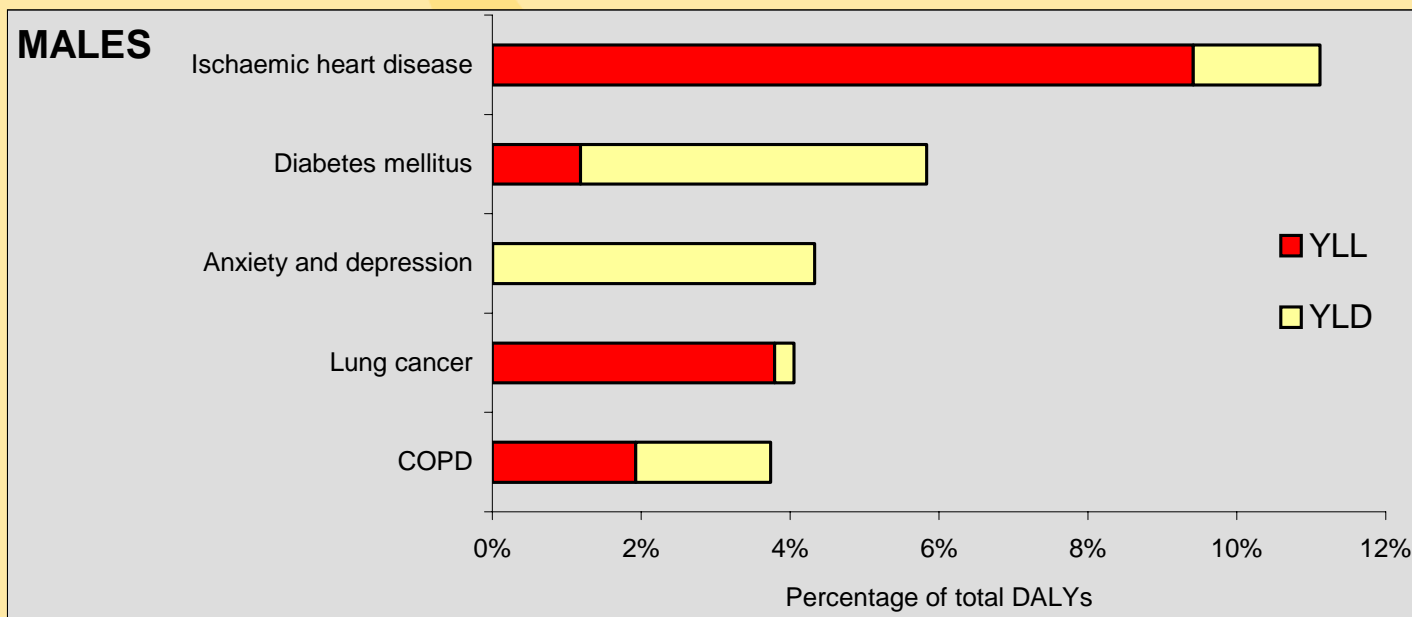
# Workforce Planning

Projection Scenario	Doctor 2016 Projection deficit	Enrolled Nurse 2016 Projection deficit	Registered Nurse 2016 Projection deficit
Demand - Model Patient Days	716	782	4755
Demand - Model Patient Days + Hosp Separations	557		4295
Demand - Model + Patient Days	777	630	3921
Demand - Model + Patient Days + Patient Separations	418	625	3895
Demand - Model + Hosp Separations	267	545	3458
<b>Average</b>	<b>547</b>	<b>645</b>	<b>4066</b>

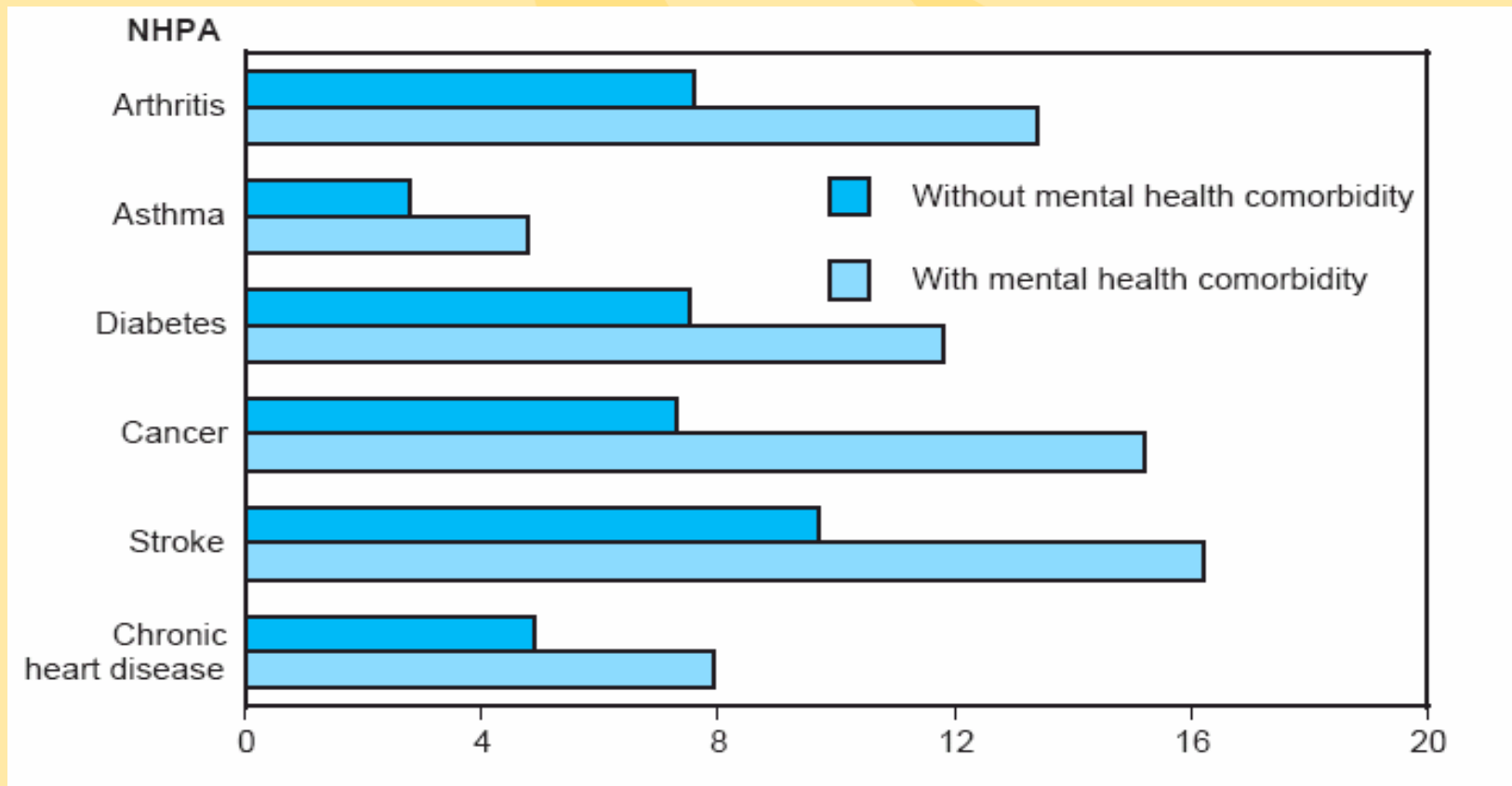


# **The Challenge Chronic Disease**

# Leading specific causes of QBoD, 2003



# Mental health problems as comorbidity in National Health Priority Area (NHPA) hospital separations, 2001–02

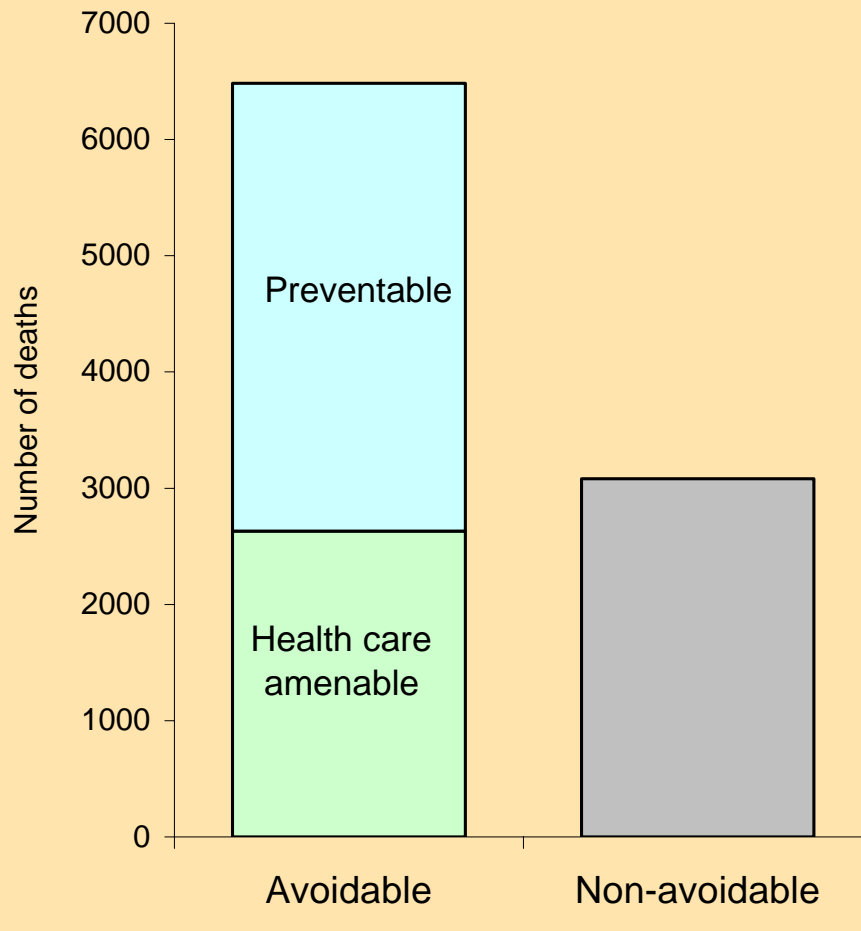


Average length of stay (days)

Australia's Health, 2004

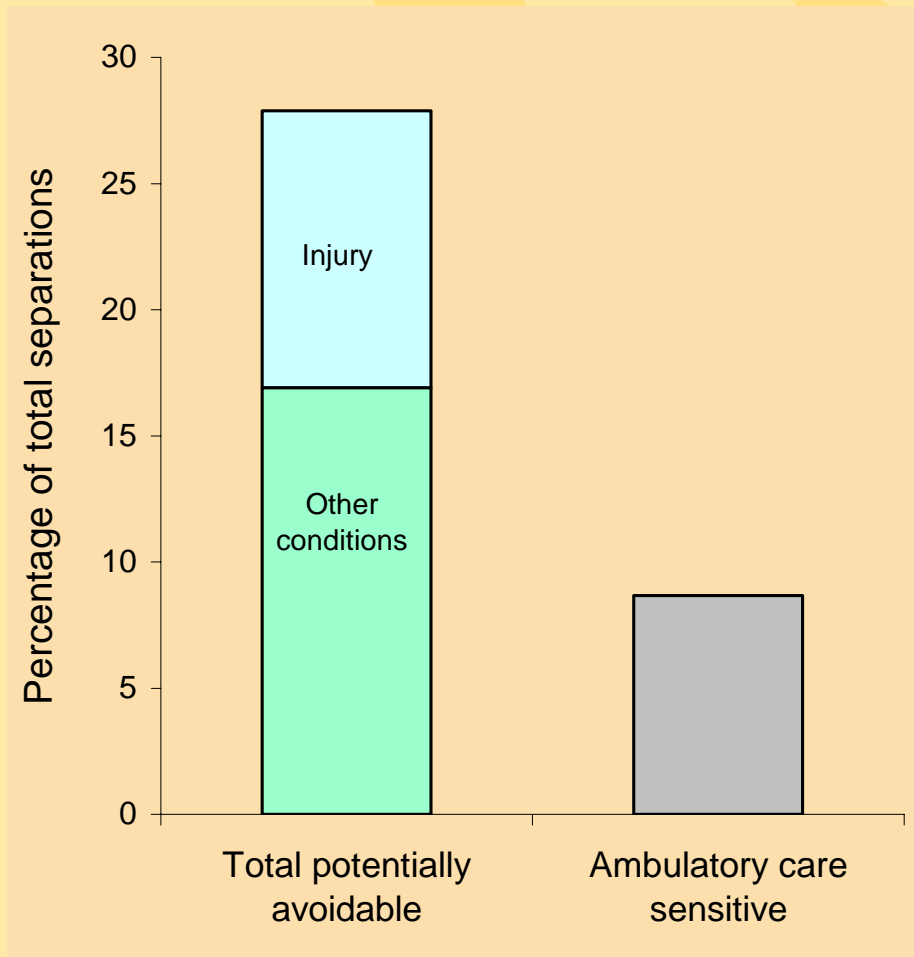
# Avoidable premature deaths

## Deaths aged 0-74 years, Queensland, 2004

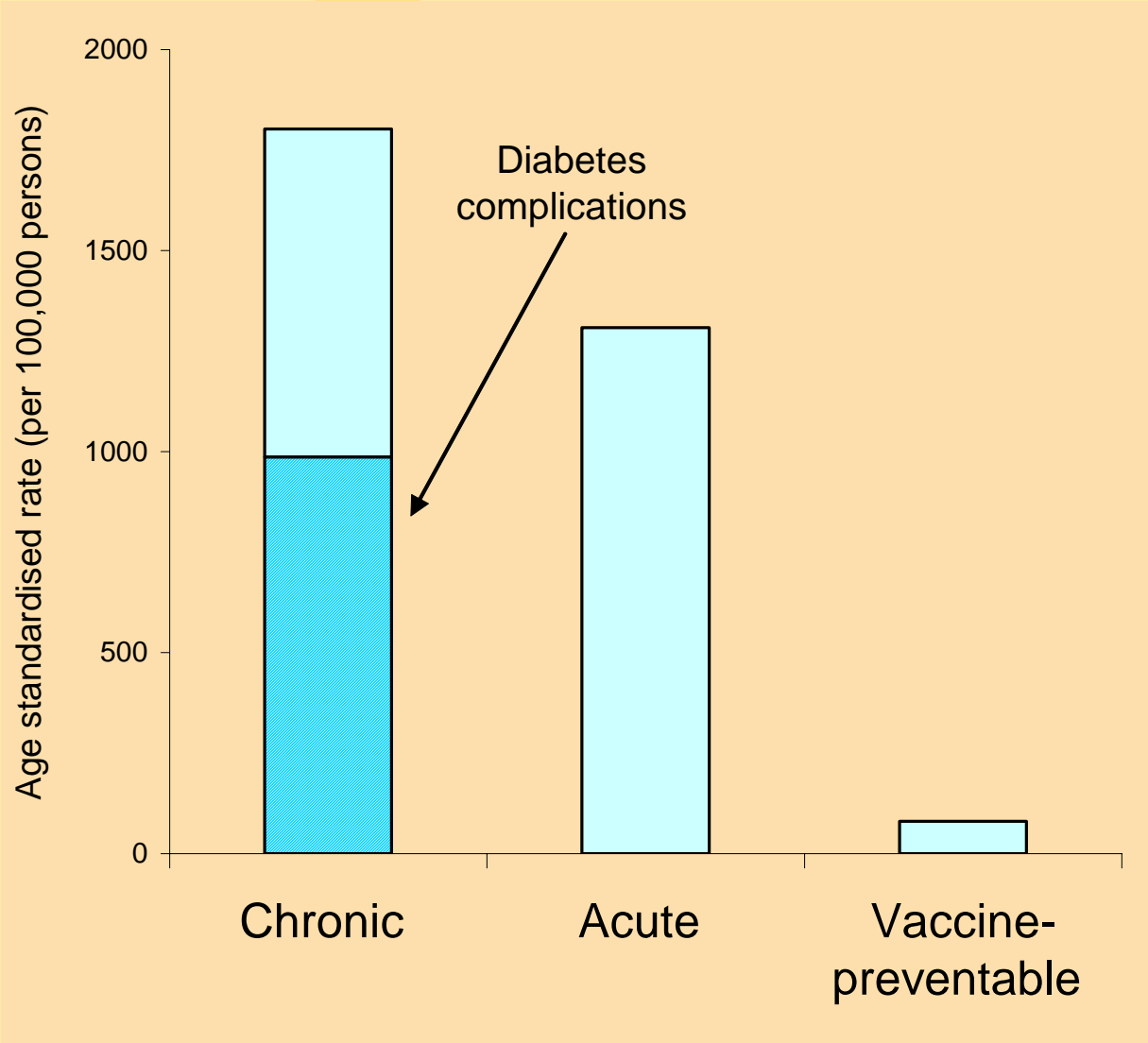


- 64% avoidable (6805 deaths pa) - 4% higher than Australia
- 59% of these preventable, ie 38% of total

# Potentially avoidable hospitalisations



# Ambulatory case sensitive hospitalisations

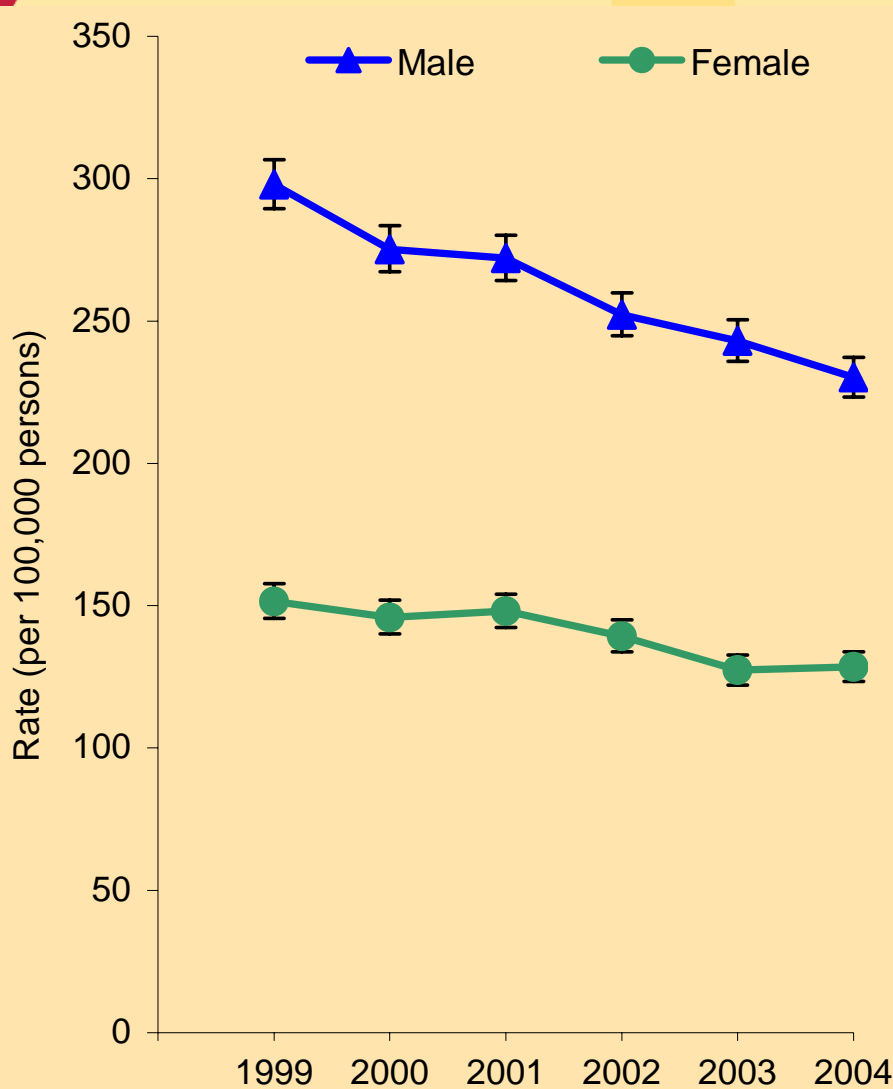


# Burden of Disease Qld.

By 2023

- Premature mortality decrease 12%pp
- Disability burden projected to increase 18%pp
- IHD disability burden to double.
- Diabetes burden to become top specific cause

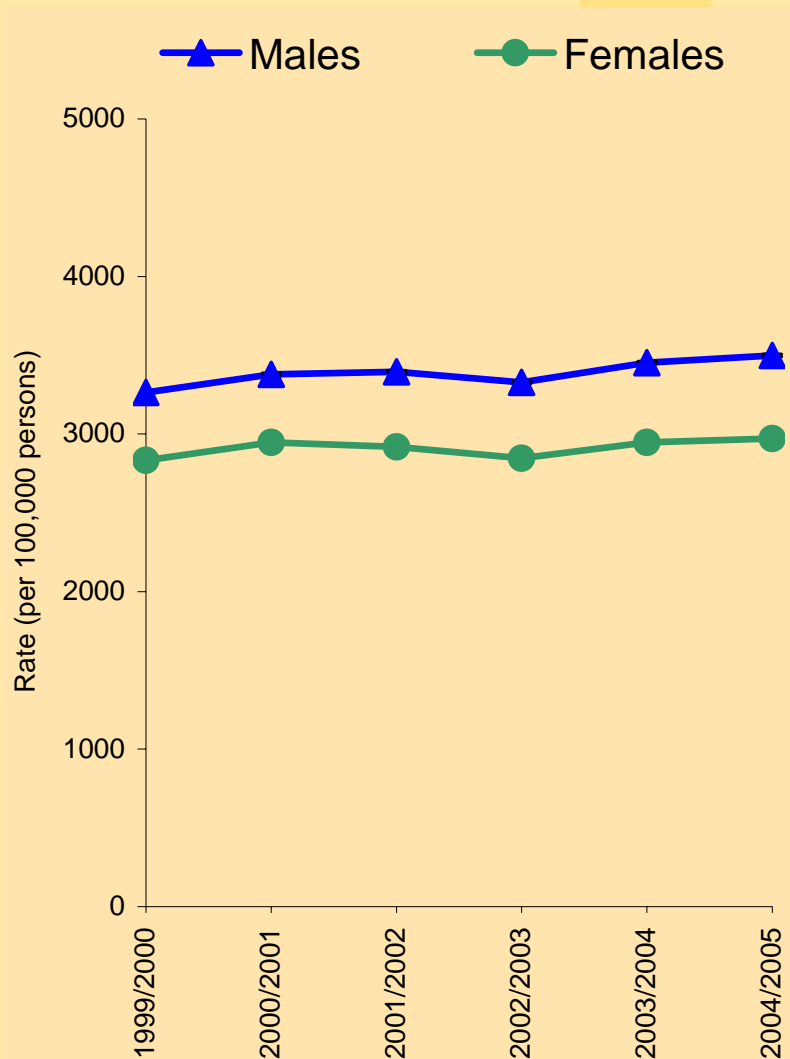
# Avoidable deaths rates (0-74 years), Queensland, 1999-2004



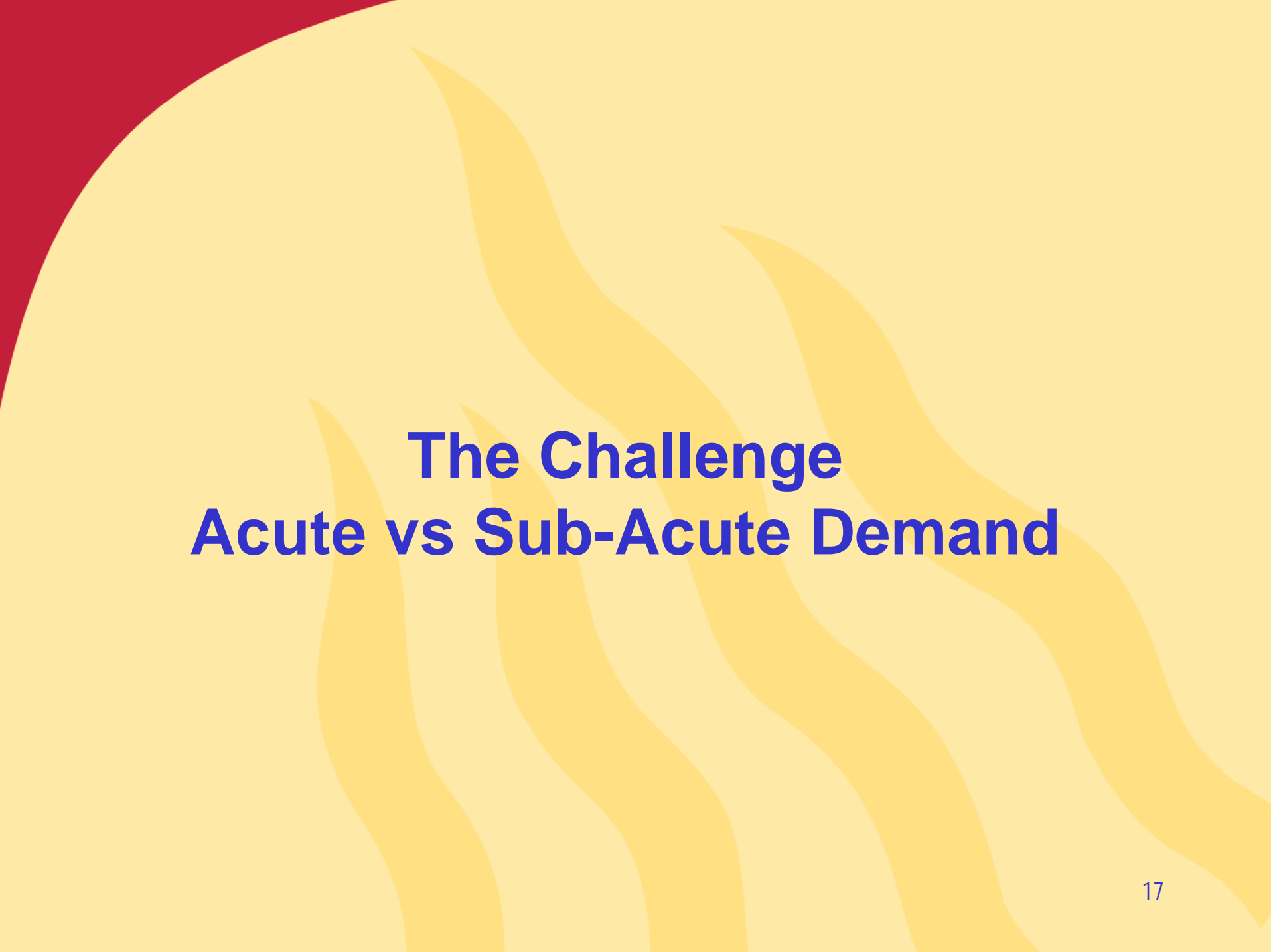
- 22% decrease for males

- 14% decrease for females

# Avoidable hospital separations 0-85+, Queensland, 1999/00-2004/05



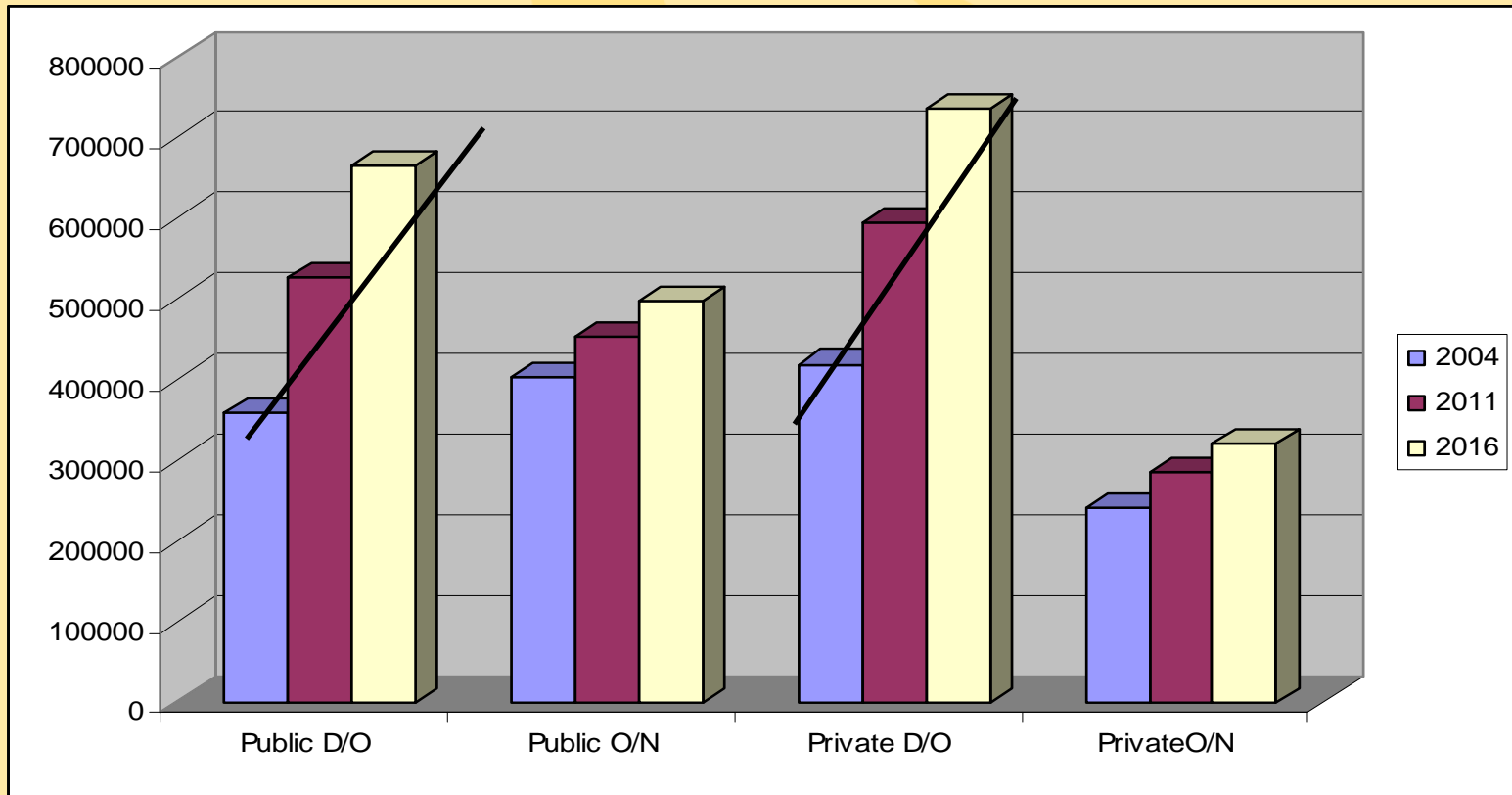
rate steady –  
22% increase  
in number  
due to  
population  
growth



# **The Challenge**

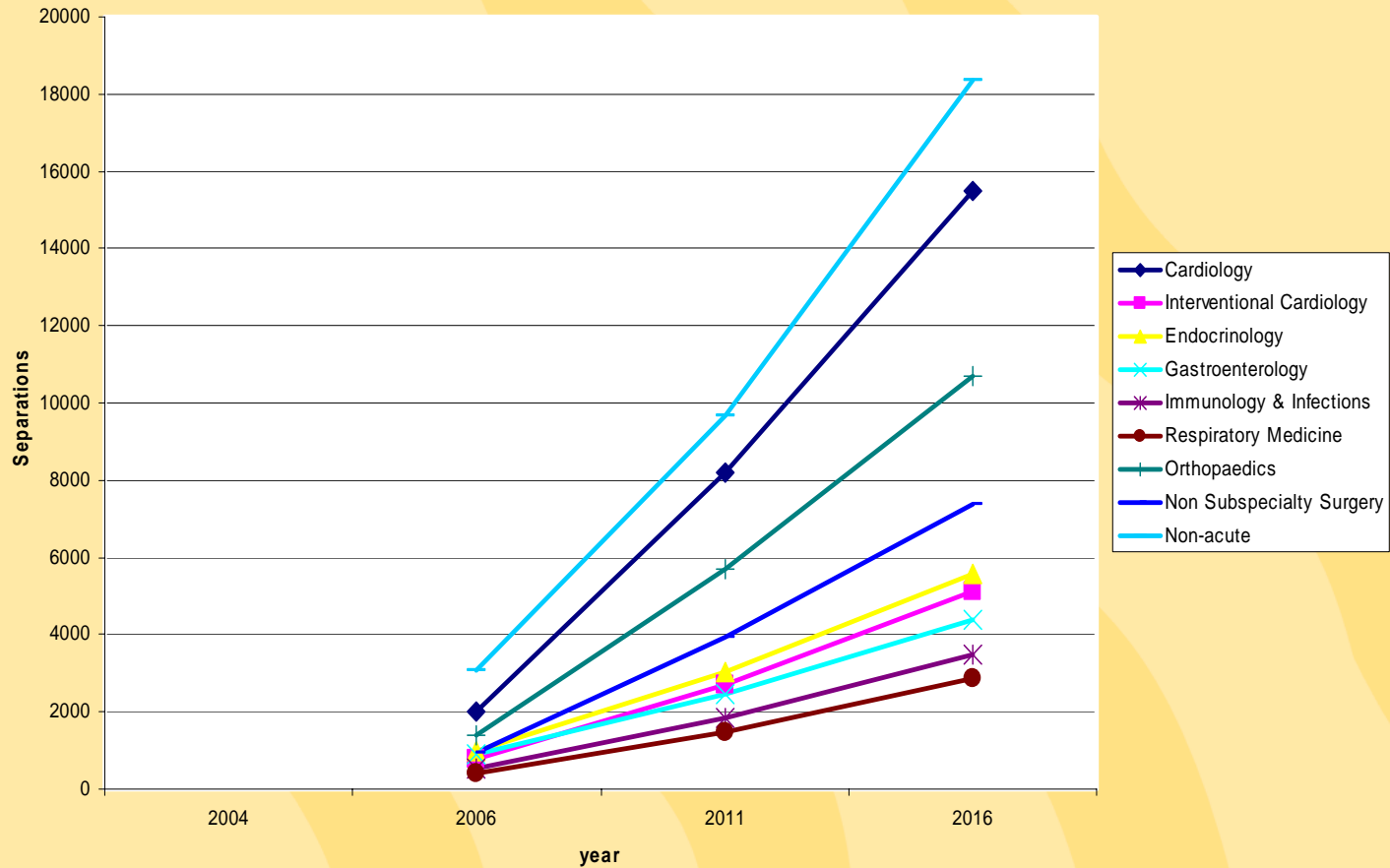
## **Acute vs Sub-Acute Demand**

# Projected demand for hospital admission, 2004-1016 (ISQ)



Projected demand for hospital admission, Queensland residents, 2004-2016 (Source: Hards, 2006)

# SRG's with greatest projected growth-2004-2016-Public Hospitals





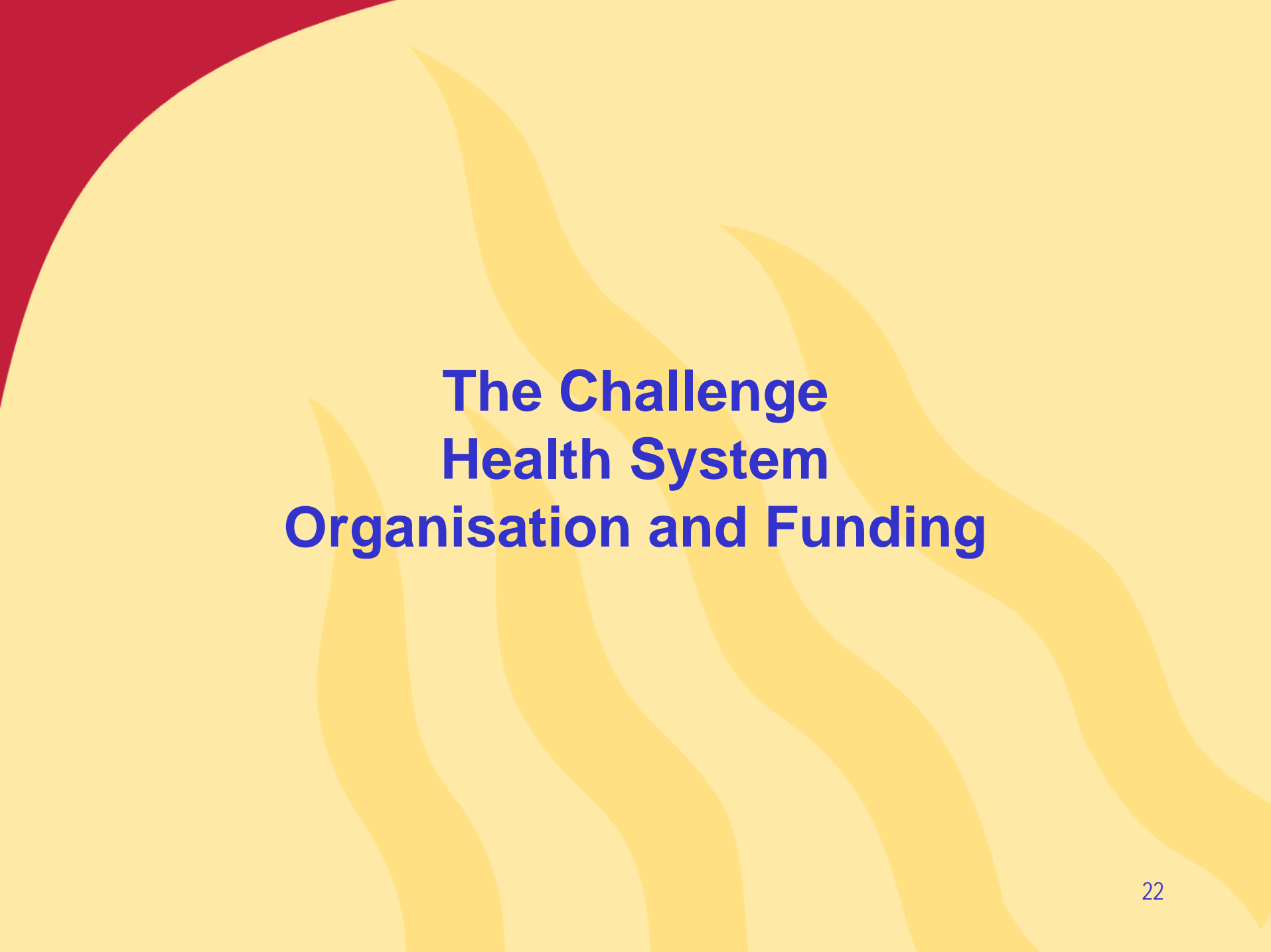
# **The Challenge**

## **Keeping Up With Expectations**

# Health Consumers

- **Tomorrows Patients**
  - Better informed
  - More educated
  - Time pressured
  - More affluent
  - Less deferential to authority and professionals
  - Have more to compare health services against
  - Want more control and more choice

McKinsey's 2001



# **The Challenge Health System Organisation and Funding**

# System Issues

## Policy and Funding

- **Investment in Acute Care vs Chronic and Sub-Acute**
- **Financing Systems are Fragmented**
- **Provider Incentives are Misaligned**
- **Standards and Monitoring are Insufficient**
- **Intersectoral Links are Overlooked**

# **System Issues Health Care Organization and its Links to the Community**

- **Failure to Organize Care for Chronic Conditions**
- **Health Care Workers Lack Tools and Expertise**
- **Practice is not Informed by Scientific Evidence**
- **Failure to Address Prevention**
- **Information Systems are Not in Place**
- **Failure to Connect with Community Resources**
- **Lack of Capacity for Self-management Training**

# System Issues Patient-Clinician

- **Failure to Empower Patients**
- **Failure to Value Patient Interactions**
- **Failure to Organize Care for Chronic Conditions**
- **Patient Effectiveness**

# Failure to Empower Patients

- Chronic health problems are enduring.
- Care strategies must reflect a protracted time frame
- Clarify for patients their roles and responsibilities in managing their health problems.
- Evidence from over 400 studies of self-management programmes shows providing counselling, education, information feedback, and other supports to patients with chronic conditions are associated with improved outcomes.
- Evidence from Qld patients with diabetes is that it is low and most don't feel equipped to do so.

# The Opportunities

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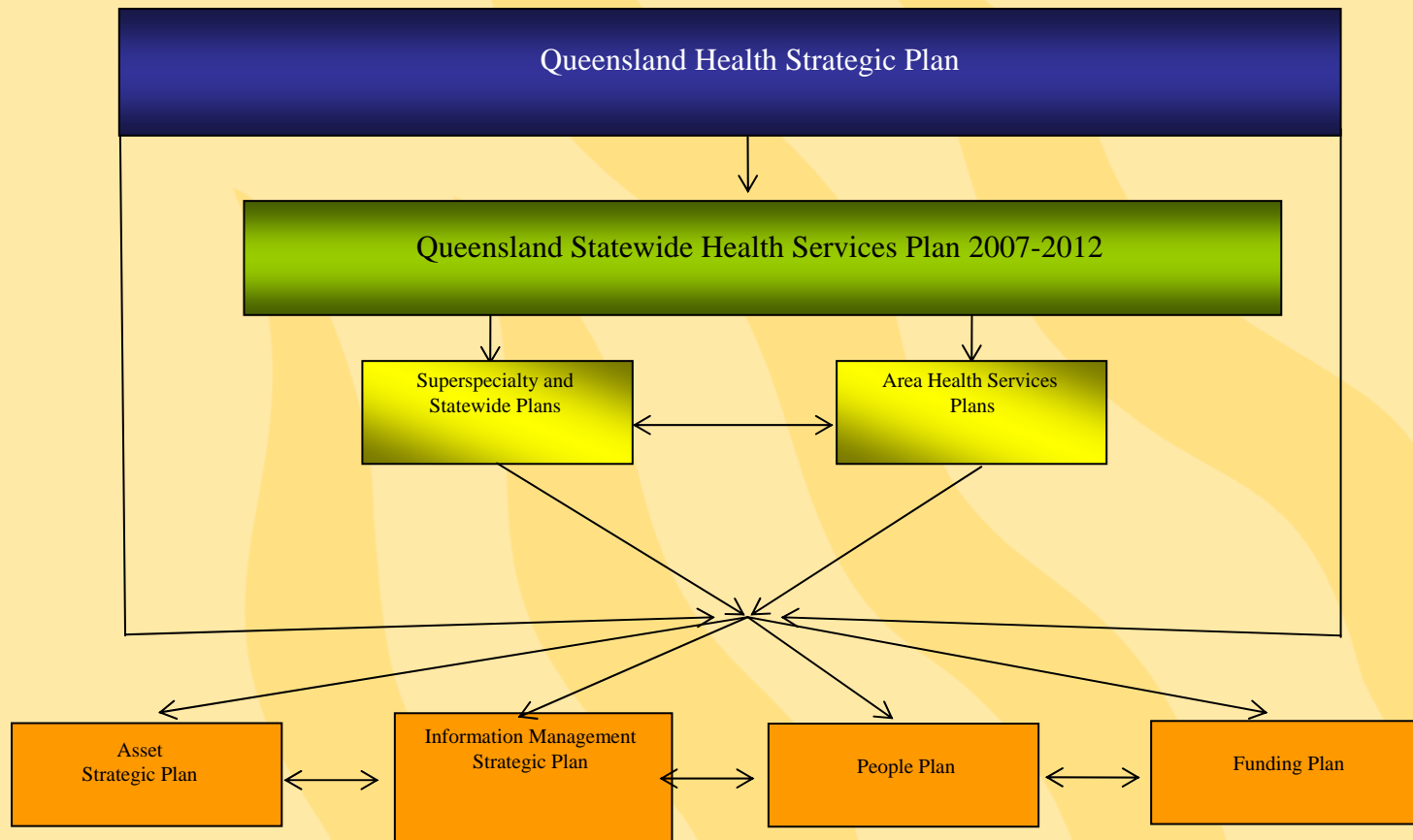
- Transparency and Performance Reporting
- Statewide Health Services Plan
- New Funding Model and New Funding
- Clinical Workforce
- E-Health Strategy
- Australian Health Care Agreement Re-Negotiation
- New Infrastructure
  - Hospitals
  - Health Precincts

# Queensland Health Services

- 2007-8 Operating Budget \$7.15 billion, Capital Budget \$633 million
- 22 hospitals providing 90% of services
- Additional 150+ smaller hospitals and community facilities
- Approximately 50% of all surgery in state but almost all acute trauma and high end complex surgery
- 65000+ staff

# **2006 Statewide Health Services Plan**

# 2006 Planning Framework



# Statewide Health Services Plan

## Two Overarching Goals

1. Improving access to safe & sustainable services
2. Better meeting needs across the health continuum  
Prevention, primary care, acute care, subacute care, rehabilitation, palliation

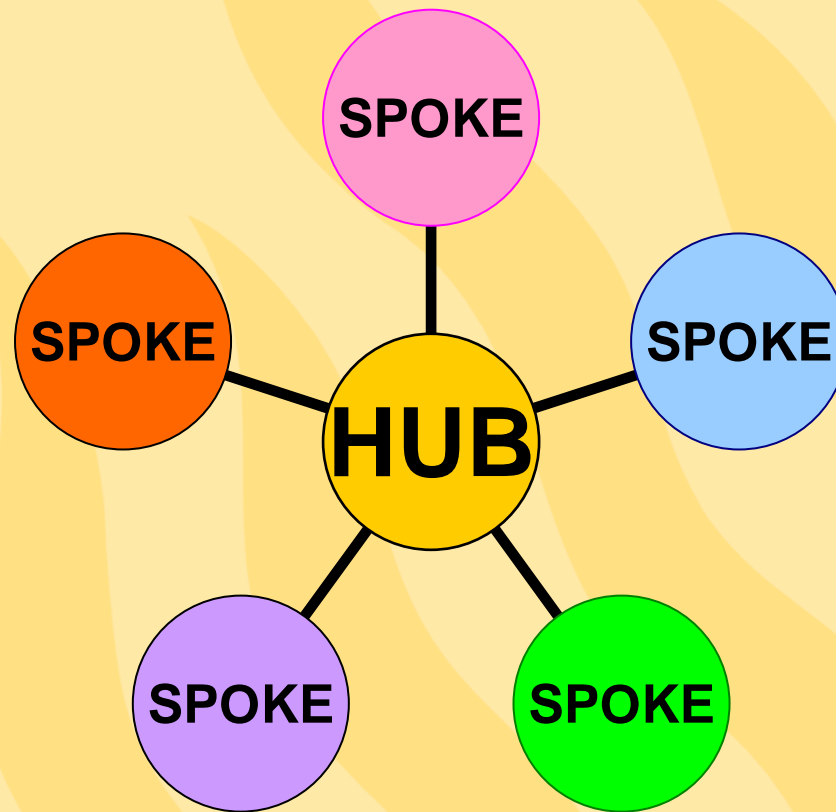
# State Wide Health Services Plan

## Improving access to safe and sustainable health services

### Relevant Aims

- Establish links between services to create safe and sustainable service networks.
- Define hospital/facility roles to improve planning and service delivery.
- Define statewide and superspecialty services to ensure that all Queenslanders have access to highly specialised services that cannot be provided locally.
- Improve the safety of health services.

**Establish links between services to create safe and sustainable service networks.**



**Establish links between services to create safe and sustainable service networks.**

**Integrated  
Multicampus  
Model**

**Health  
Service A**

**Health  
Service B**

**Health  
Service C**

# **Define hospital/facility roles to improve planning and service delivery.**

## **Clinical Services Capability Framework**

- **Define the roles of each hospital and facility within the network**
- **Define the level of service (if any) that each hospitals will provide**
- **Defines the requirements for that level of service in terms of physical infrastructure, staffing levels and expertise and support services.**



# **The Opportunities New Hospitals, New Models**

# Queensland Health Infrastructure Background

- 1991-2001 Major hospital rebuilding program
  - Rebuilt 2 major teaching hospitals and 5 general hospitals
  - Expanded and role changed 1 specialist hospital to general hospitals
  - Built 1 new general hospital
  - Refurbishments and Expansions
- But bed numbers remained stable
  - Projections indicated fewer beds
  - Models of care based on fewer beds

# Projecting Hospital Bed Demand

## Lessons Learnt

- Methodology historically underestimates demand –
  - 1. Robustness of the population projections
  - 2. the ability to quantify the impact of emerging medical technology, changes in service models is limited to probably about 5-10 years but facility planning needs a horizon of at least 15-20 years.
  - 3. Impact of increasing life expectancy increases morbidity but also the need/demand for repeat treatment.

(Odette Pagan, 2007)

# Major Responses – Acute Services

- Increasing capacity to deliver acute services
  - Increase Bed and Bed Equivalent Capacity
    - 3 new major tertiary hospitals including combined paediatric hospitals
  - Priorities for investment:
    - subacute
    - intensive care
    - extended care
    - renal
    - mental health
  - Demand management strategies
    - Avoidable admissions

# Designing Hospitals to promote Strategic Directions

- Services Models
- Patient Safety
- Quality
- Workplace Safety
- Clinical Teaching
- Clinical Research
- Innovation

# Designing for Health Care Service Effectiveness and Efficiency

What infrastructure will facilitate new service delivery models?

- **Does it need to be a hospital?**
  - **Moving ambulatory services closer to communities (medical specialist services, allied health, diagnostic and procedural services)**
  - **Growing infrastructure for community based rehabilitation, palliation and geriatric services**
- **Sharing of services and specialty services across hospitals for efficiency**
- **Concentrating services to improve safety (critical mass of expertise, procedural volume)**

# Designing for Improving Quality Privacy

- Physicians and Nurses very frequently breach patient confidentiality and privacy by talking in spaces where they are overheard by other patients or persons.
- Patients in areas separated by curtains more likely to withheld sensitive information than those in walled rooms.
- Breaches of confidentiality can impact legally and clinically.

# Designing for Patient Satisfaction: Noise

- Noise sources are numerous, often unnecessarily so, and many are loud.
  - Eg paging systems, alarms, telephones, staff voices, ice machines, trolleys.
- Environmental surfaces—floors, walls, ceilings—usually are hard and sound-reflecting, not sound absorbing, creating poor acoustic conditions. (Ulrich, Lawson, & Martinez, 2003)

# Hospitals as Workplaces

- Reduce staff stress and fatigue can
  - Increase effectiveness in delivering care
  - Improve patient safety
  - Improve outcomes
  - Improve overall healthcare quality
- Common Contributing Factors
  - Patient dissatisfaction
  - Non Clinical related Patient Movement

# Designing Hospitals: Clinical Teaching

- Past
  - Clinical teaching largely ward based
  - Physical requirements small number lecture and seminar rooms
  - Technological aids minimal
- Present
  - Structured problem based learning = demand for small rooms
  - Increasing use of clinical teaching aids and simulations
  - Increasing need for recertification and upskilling

# Hospitals and Clinical Teaching Simulation Centres

A simulation centre supporting a large hospital (800 beds) could reasonably require:

- 3000+ sq m of space
- OT, ward, interview rooms
- Work 800-900 shifts per year

# Clinical Teaching and Research

- How much infrastructure is incorporated in clinical care areas?
  - Preference of clinical teachers is close access to patients
  - Reduce need for patient movement
  - More real environment

But

- More costly
- High likelihood of subsequent alternate use
- More restrictive

# Designing Hospitals: Clinical Research

- Traditional
  - Clinician involvement part time
  - Involved patients in their care
  - Equipment required mainly standard clinical being used for additional assessment
- Modern
  - Full time researchers with or without clinical training
  - Dedicated laboratories
  - Equipment specification high end
  - Increasingly ambulatory focussed

# Conclusions

- Demand on health care will continue to increase due to changing demography, chronic disease and expectations.
- Opportunities do exist to do things that can increase efficiency, effectiveness and satisfaction.
- We will need to change our models of care to better match demands.
- New hospitals should be opportunities to lead the way in change and innovation in care models.