

Gary Geelhoed
MBBS,FRACP, FACEM, MD

Director Emergency Dept
Princess Margaret Hospital for Children

***Association between reduced
overcrowding and decreased
mortality for emergency patients
following introduction of the 4
hour rule in WA***

State of Perth's Public Hospital Emergency Services

- Why do we have access block and overcrowding
- demonstrate it is bad but.....
- **getting worse and not sustainable**
- comparisons
- solutions

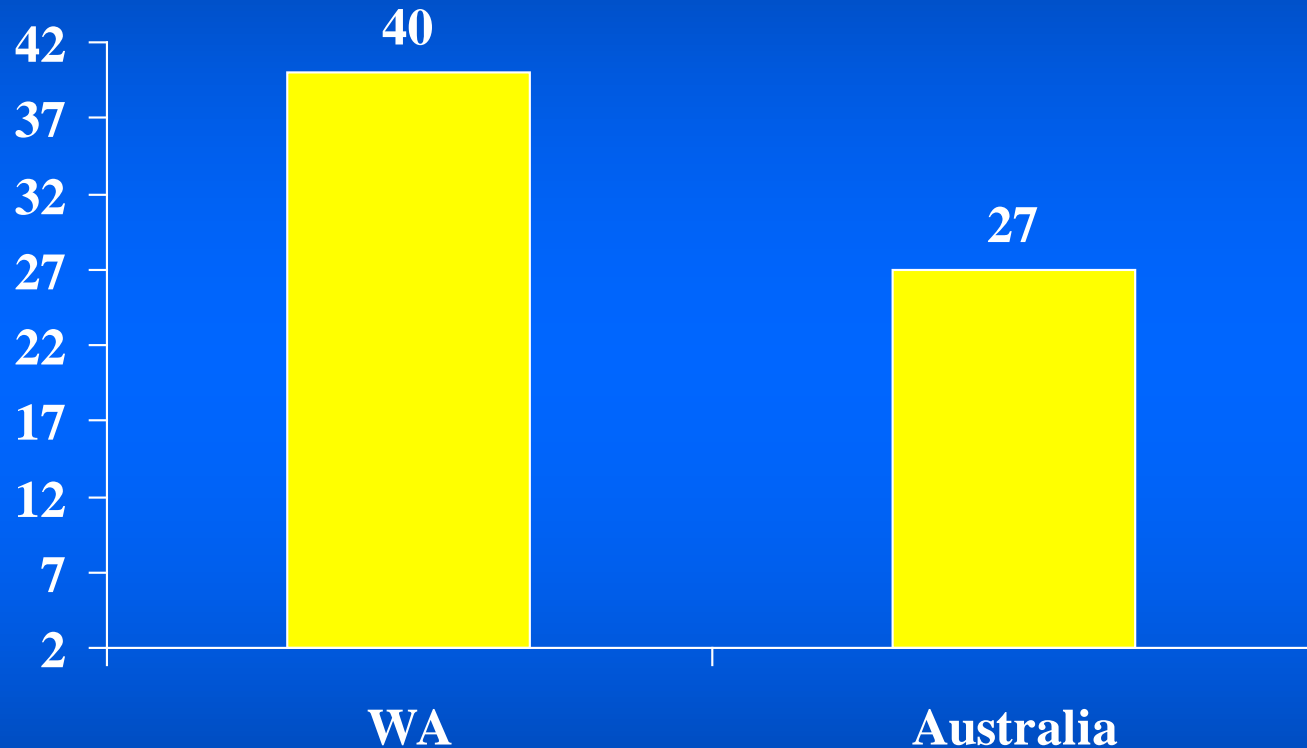
Presentation to WA Health Minister 2007

Why do we have access block?

“Upstream” Increased demand on EDs

- 2% per year population growth in WA
- 3% **cumulative** per year due to ageing population
- increased difficulty to access a GP in an “emergency”

Population growth WA vs Australia



1984- 2003

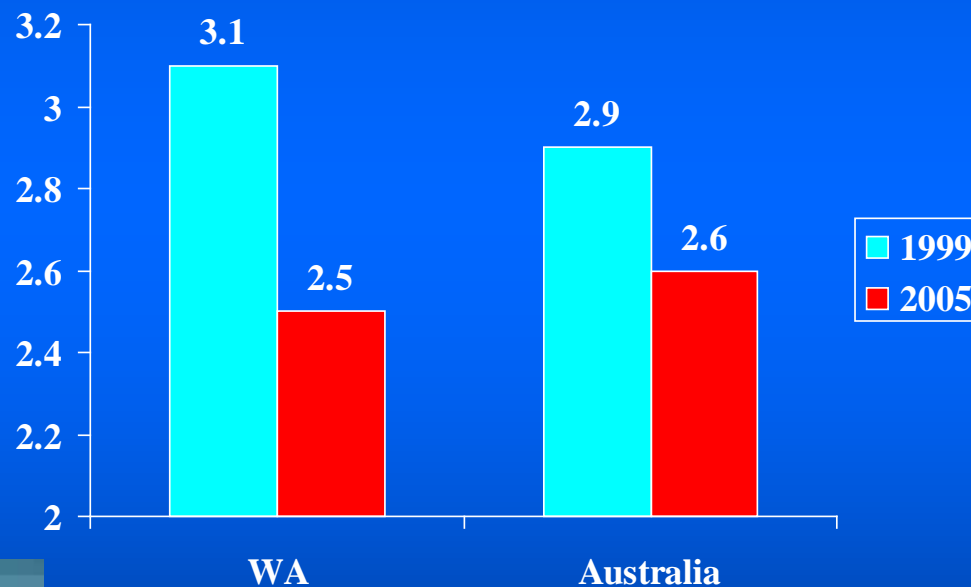
Why do we have access block?

“Downstream” Increased
demand on EDs

- Reduction in number of inpatient beds
- relative lack of “community” beds

1999 to 2005

- WA's public beds have reduced 18%
- Australian public beds have reduced 10%



Beds per 1000 population

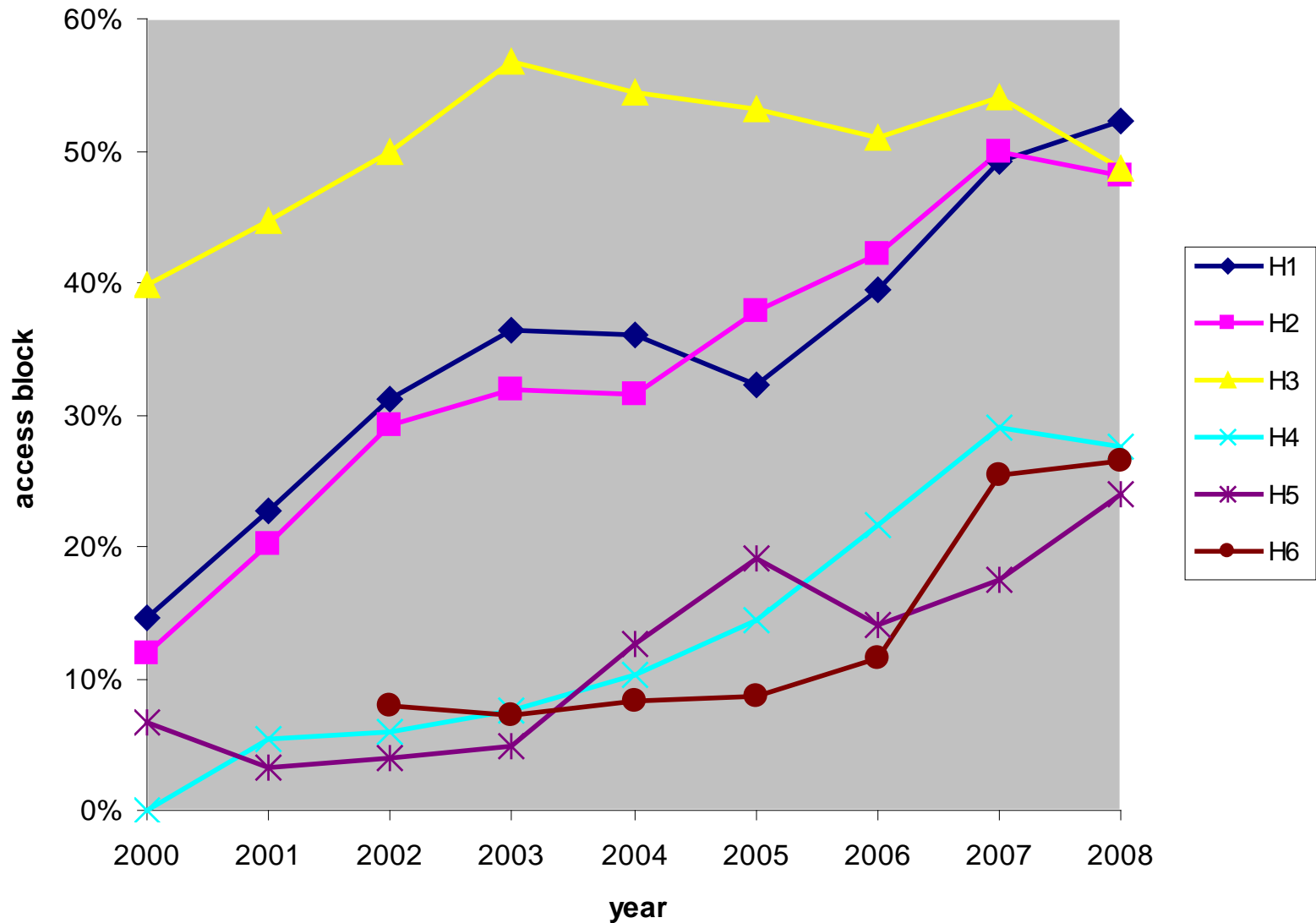


Australian Government
Department of Health and Ageing

Why do we have access block?

- Not enough beds!
- “Command economy quotas” on wards.
Free enterprise in ED!
- 100% over in ED but 0% over on wards
- Why not 10% over in ED and wards?

Access Block 3 tertiary and 3 secondary WA Hospitals 2000-2008



overcrowding

- Emergency departments are designed to deliver episodic acute care.
- staff in some emergency departments spend 50% of their time delivering inpatient care.
- ED staff not trained and their departments are not designed to treat inpatients.

overcrowding

- Increased adverse incidents
 - Service availability and performance degrades
 - Increased length of inpatient stay.
- Staff issues: some consequences for staff are measurable such as increased sick leave and overtime claims.
- Training: the College's concerns about a relationship between training dropout rate and emergency department overcrowding. **Emergency medicine trainees report high stress levels associated with working conditions.**

Adverse affects

Many studies, including from WA, show increased risk of patient harm, **including death**, associated with emergency department overcrowding.

Estimated 120 extra deaths per year in WA. ? Double that in 2007 given Access Block is so much worse.

Risk of around 30% for hospitals operating near or above 100% in comparison to the risk at **optimal occupancy of 85%**.

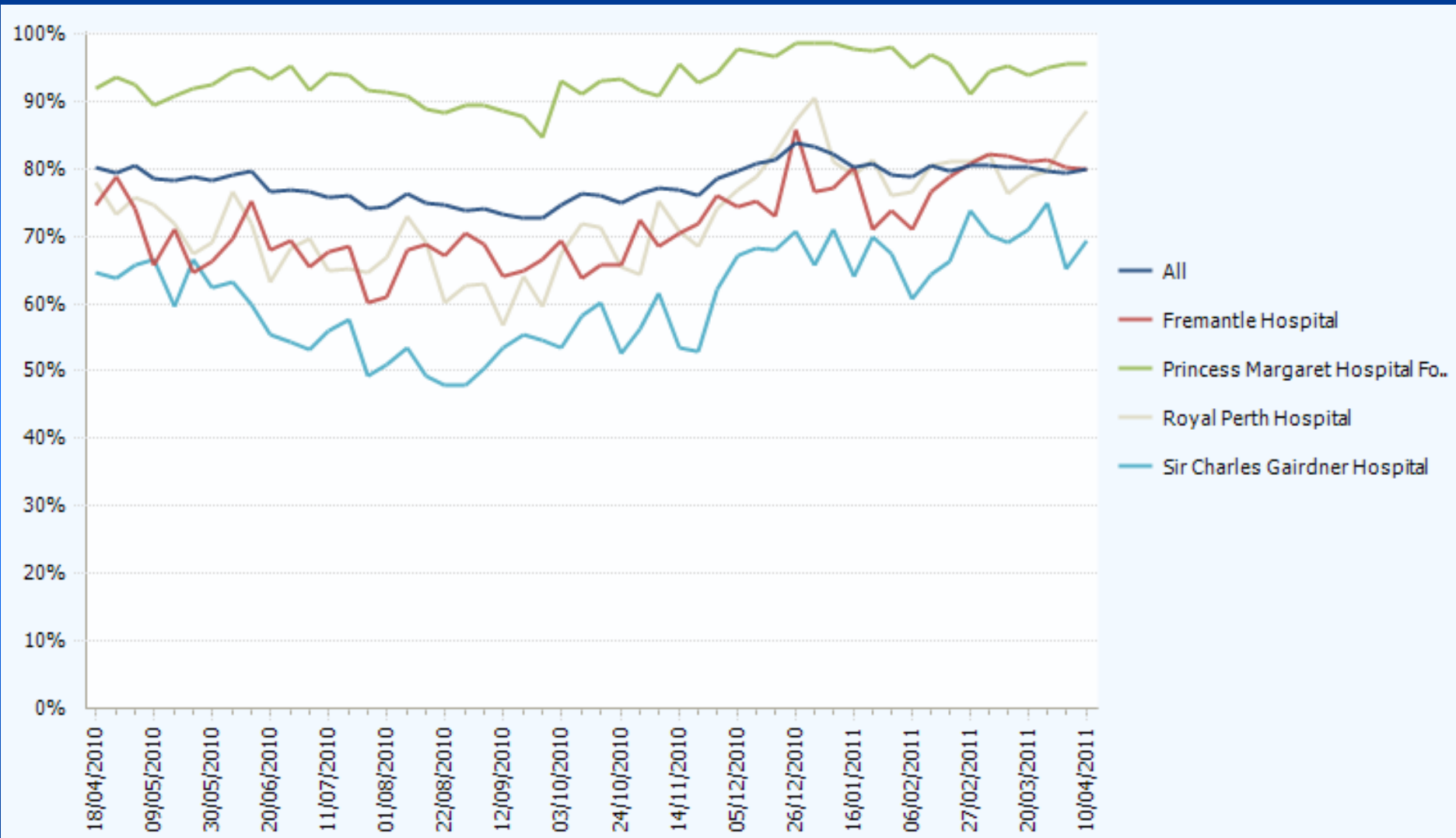
Reducing emergency department overcrowding will **substantially improve patients' safety.**

4 hr rule

- New government
- Canadian experience
- UK / England experience
 - Targets 98% within 4 hrs
- Planning phase April 2009
- Started Oct 2009
- Each hospital to find their own solutions
- Process was well resourced
- Resources not recurrent generally

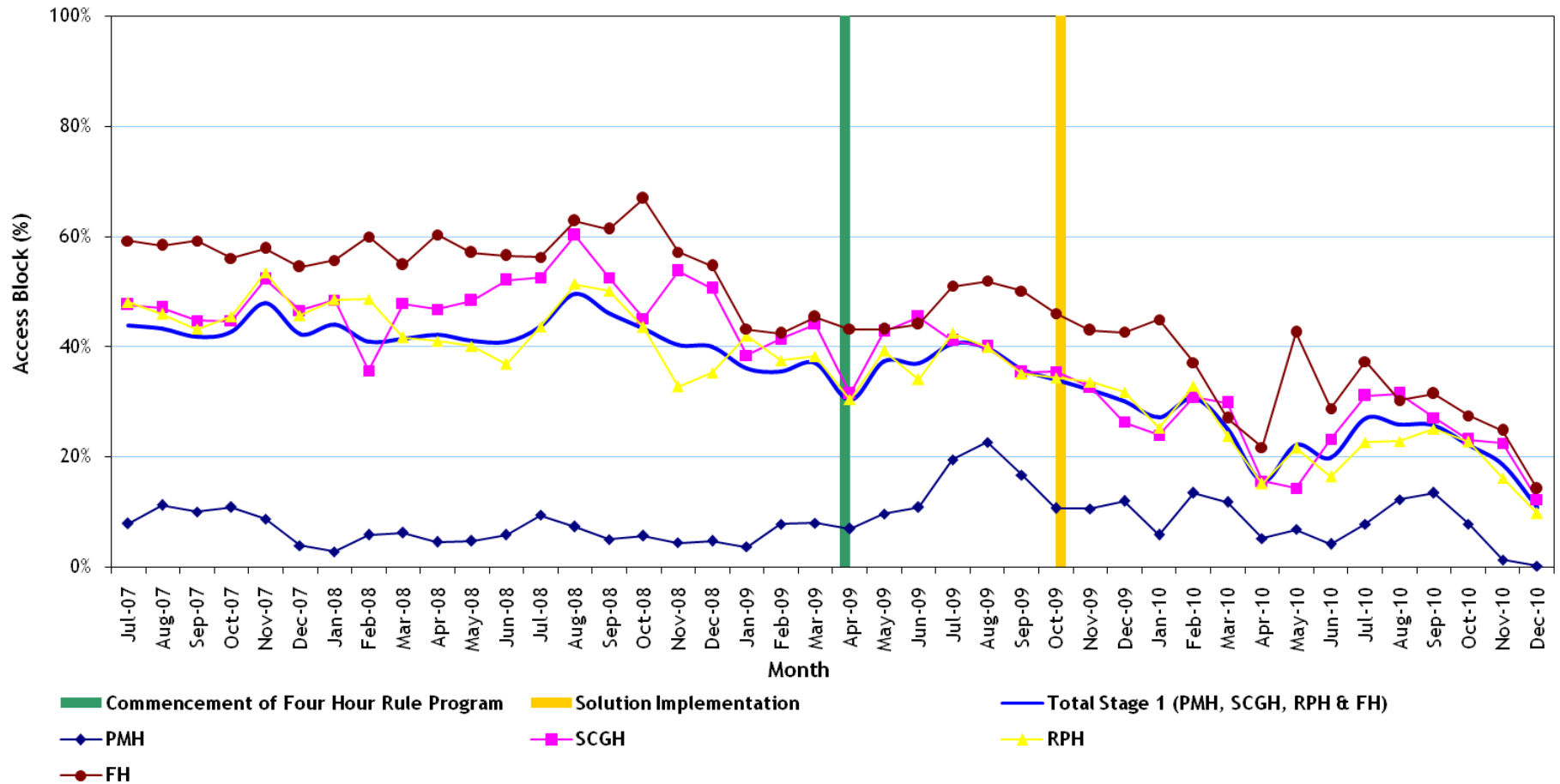
Solutions

- Hospital
 - Early rounds, early discharge
 - Discharge lounges
 - Pharmacy on time
 - Early planning for discharge
 - “breach” meetings
 - Reduced time to clean rooms

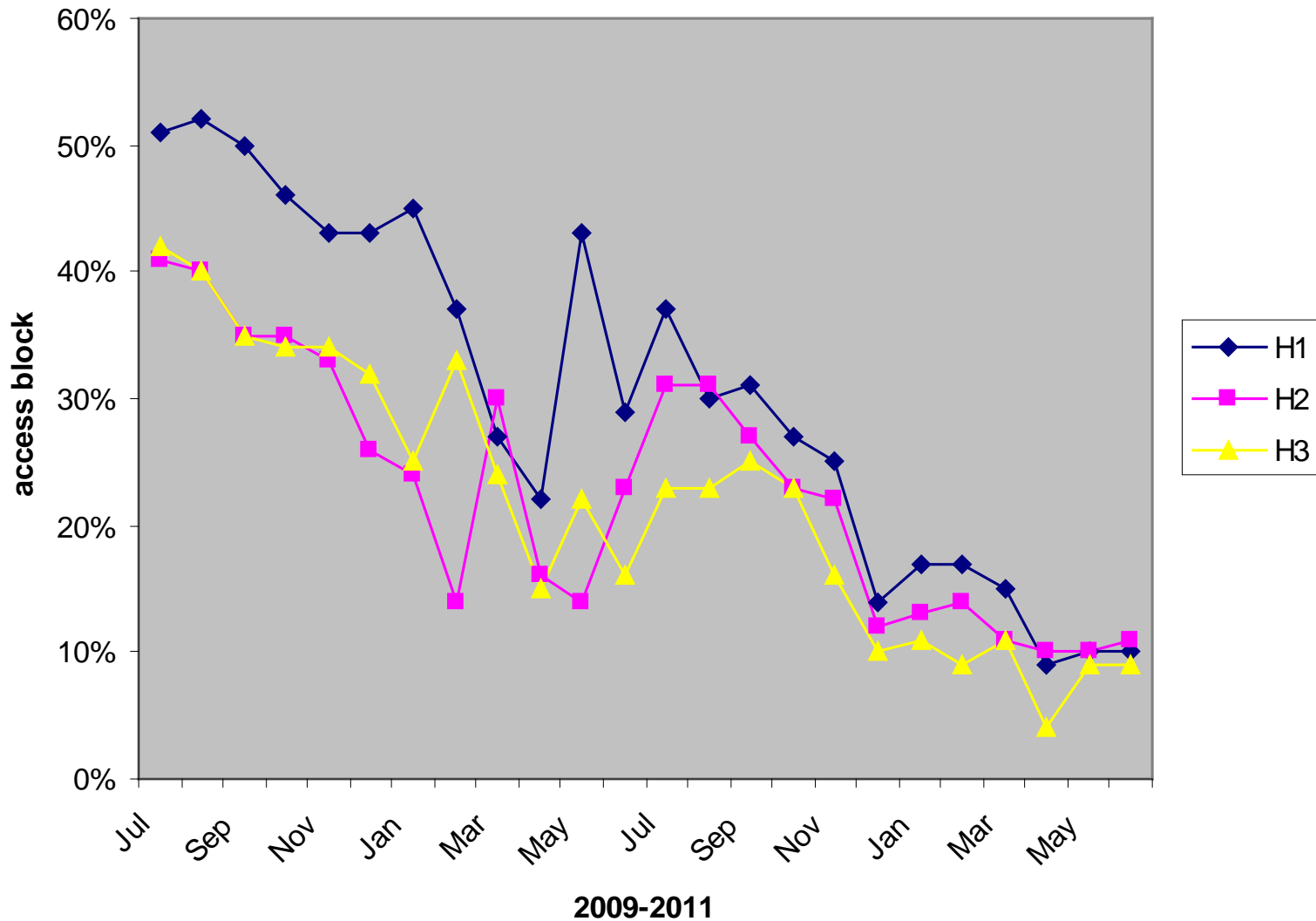


Access Block June 2007 -2010

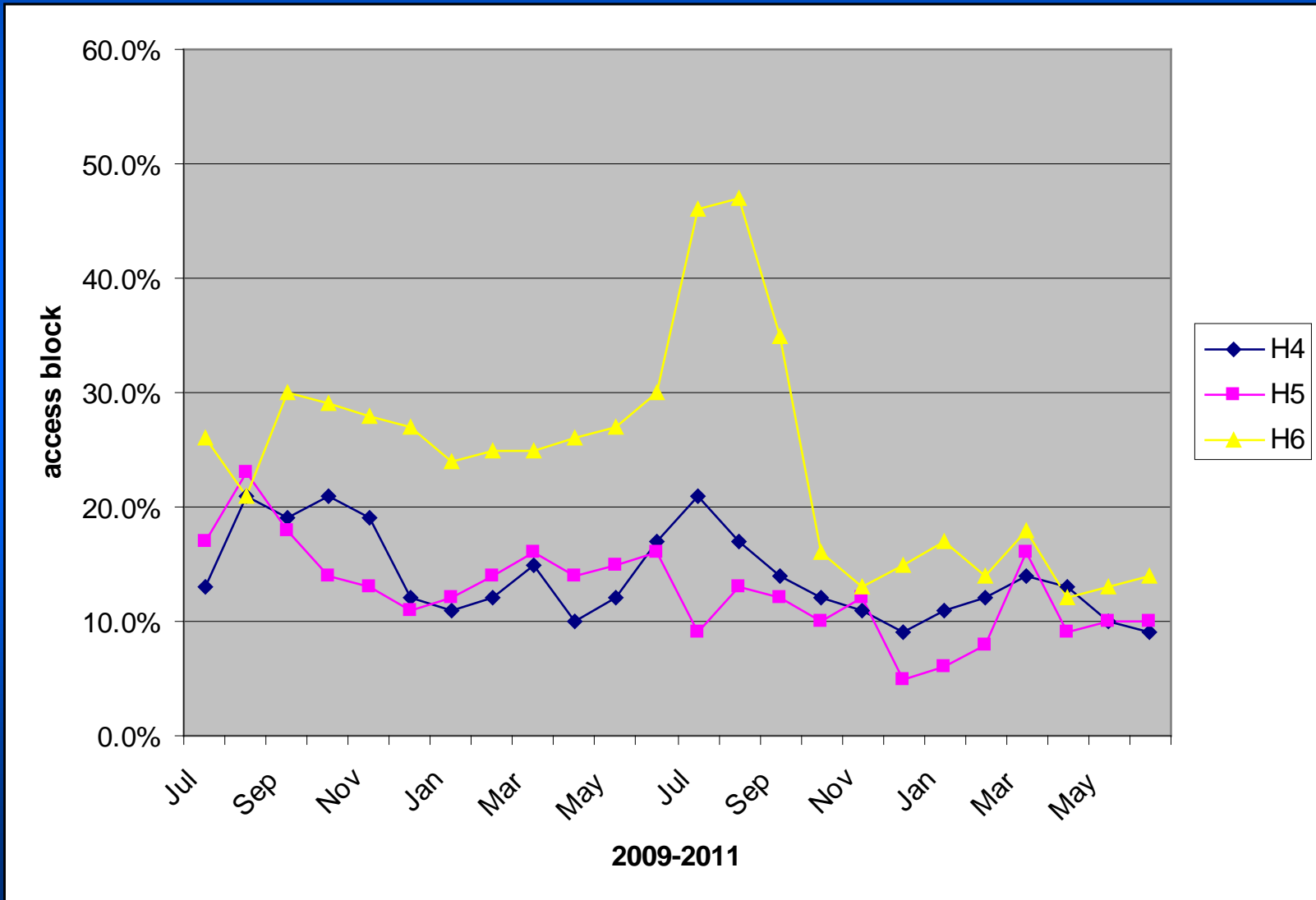
Monthly - Access Block (July 2007 - December 2010)



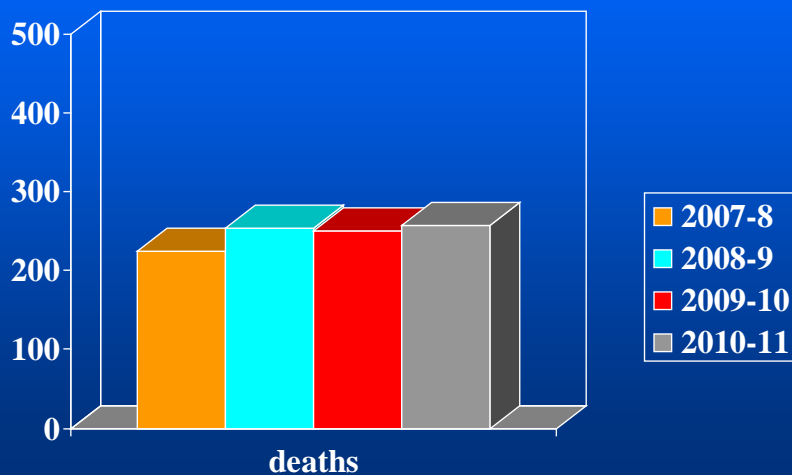
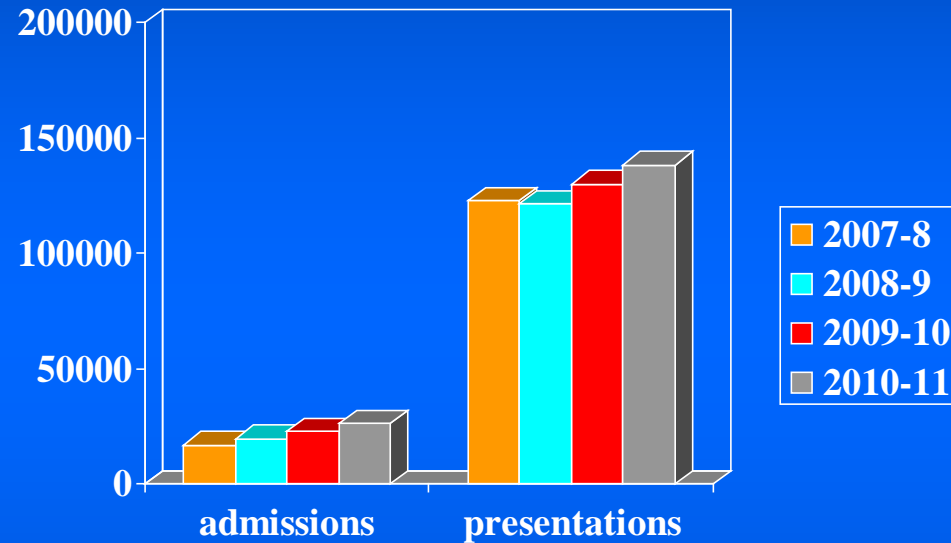
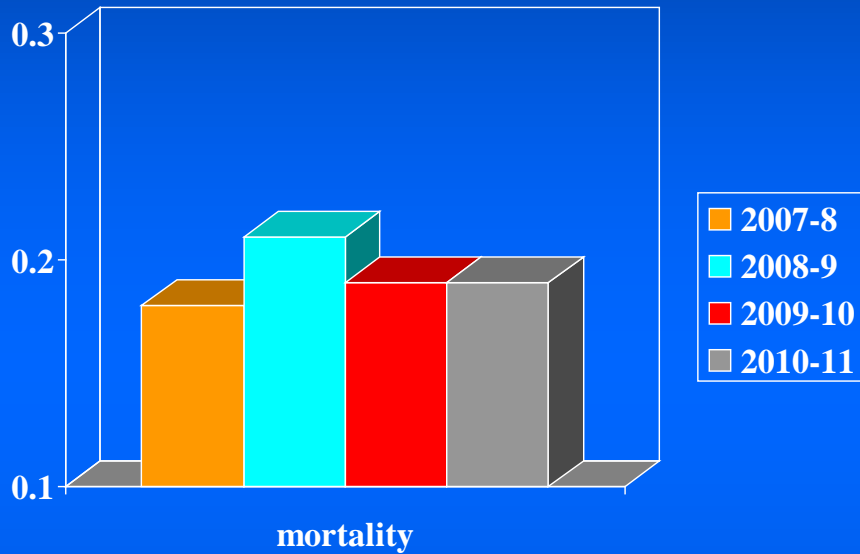
Access block 3 tertiary hospitals WA



Access block 3 secondary hospitals WA

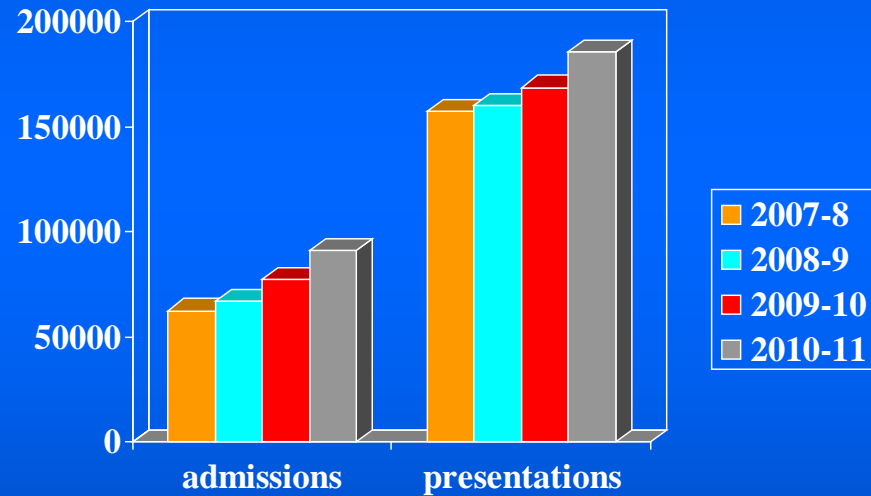
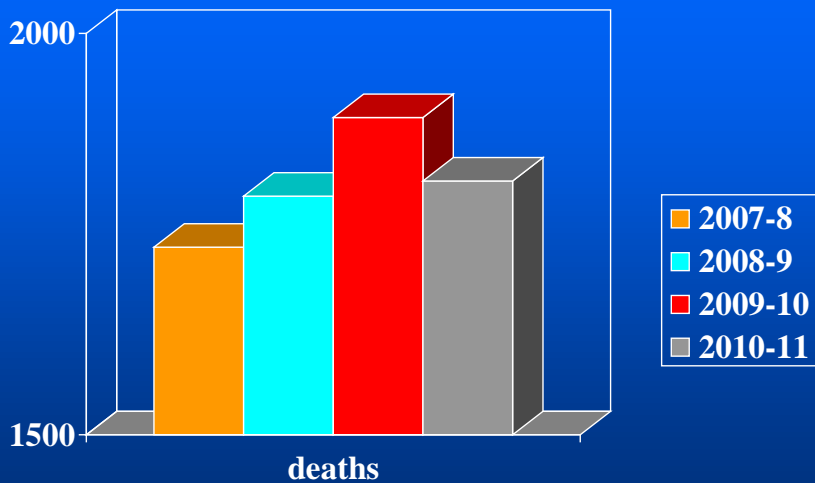
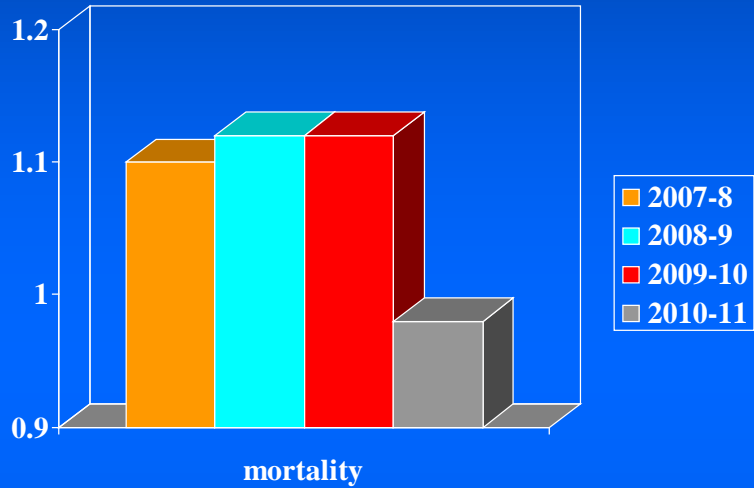


secondary hospitals



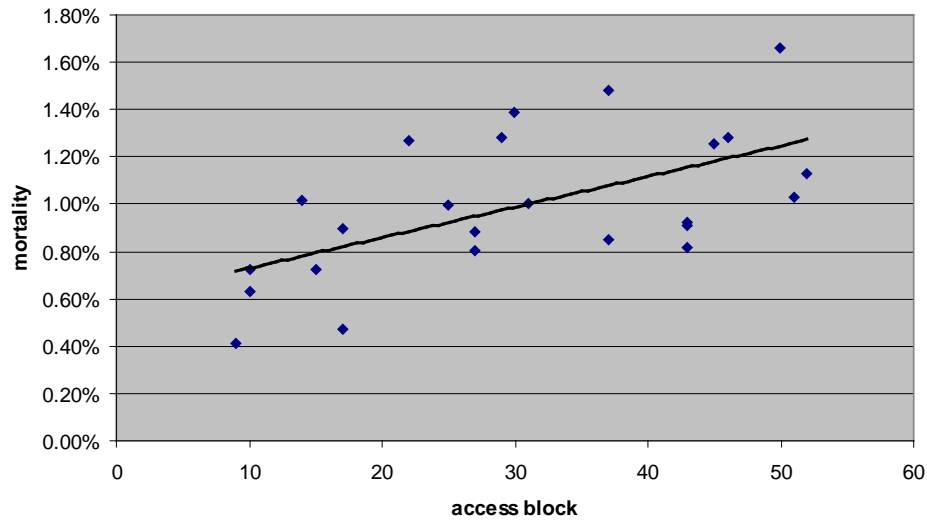
Mortality is number of deaths of patients admitted through ED during that admission as a percentage of presentations

tertiary hospitals

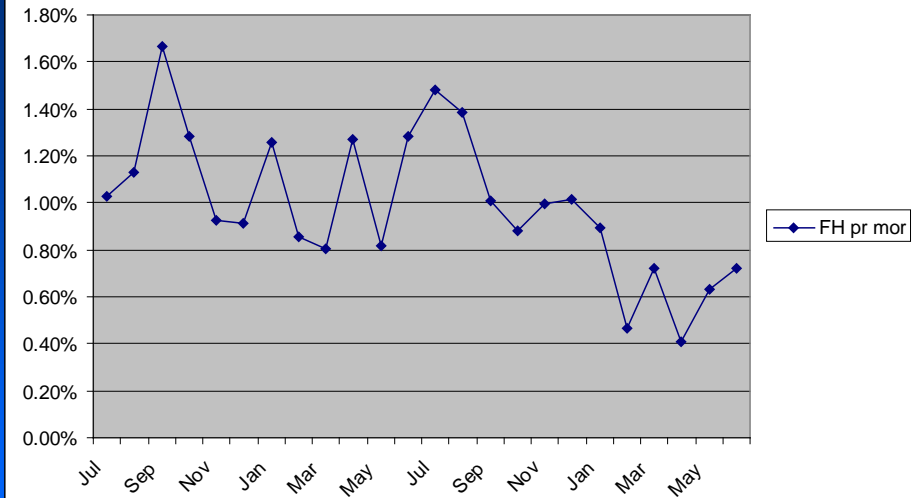


FH mortality vs access block

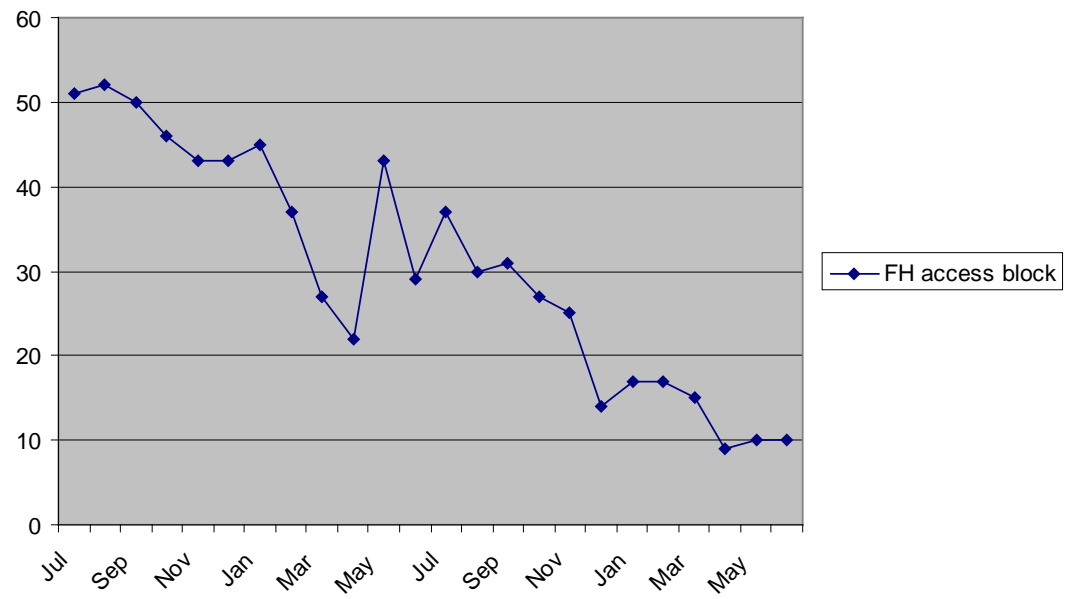
$R^2 = 0.349$



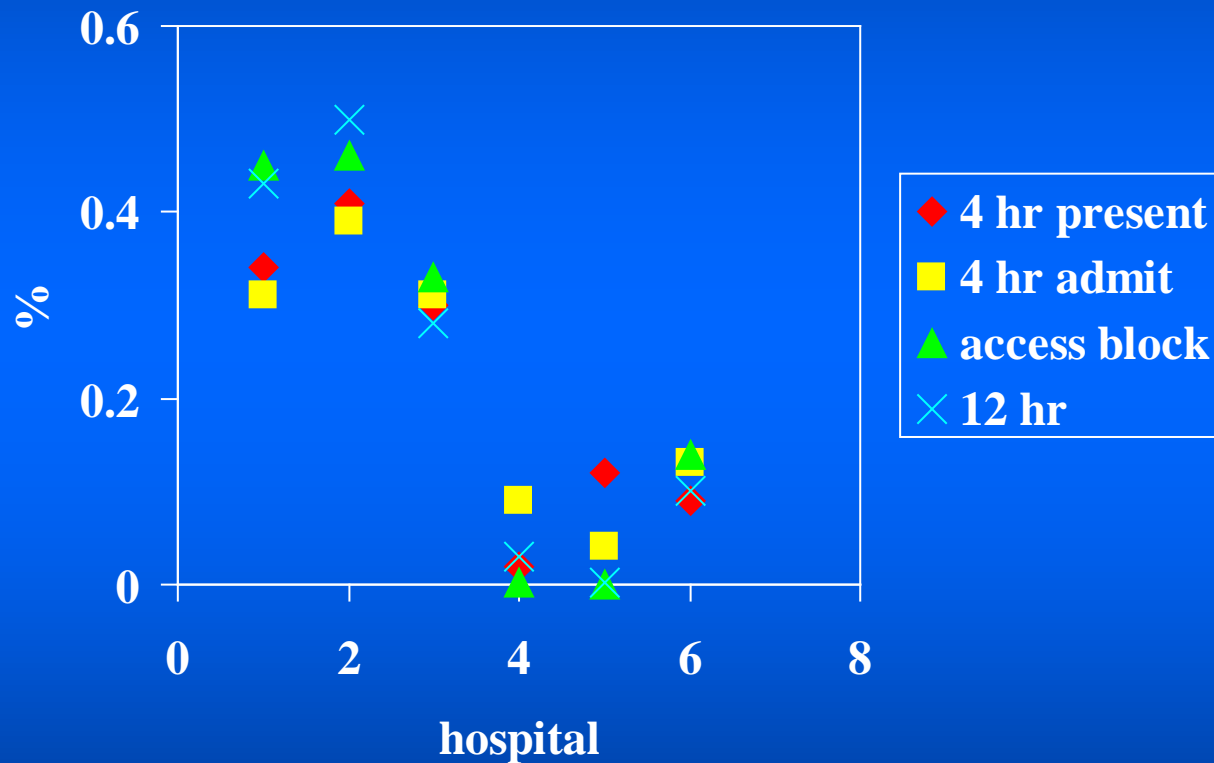
FH mortality



FH access block



R2 (coefficient of correlation) between mortality and measures of overcrowding



Is everybody happy?

- Yes
 - Patients
 - ED staff
 - Minister for Health... after setting new target of 85%
 - AMA

Is everybody happy?

- No!
 - Surgeons....
 - public campaign,
 - anecdotes
 - Emergency Physicians!
 - AMA
 - Doctors in Training

Consequences

- Doing everything in ED well entrenched
- Wards are unskilled
- Junior staff feel unsupported
- Only a temporary fix ie demand continues to grow
- Increase in presentations and admissions
- Going Australia wide