

# What we can and can't do with data and why this is important

## What we can now do with data & why this is important

- Describe populations → equity between populations
- Describe patients → similar patients get similar resources
- Describe what goes wrong with patients (for some patients) → identify and act
- Describe what ought to happen with patients (for some patients) → provide incentives

# What we can't do routinely in Queensland (yet)

- Describe a person's pathway through the system
- Collect data as sensibly as we ought

# Describing populations, RAM: Health 'need' factors/adjusters

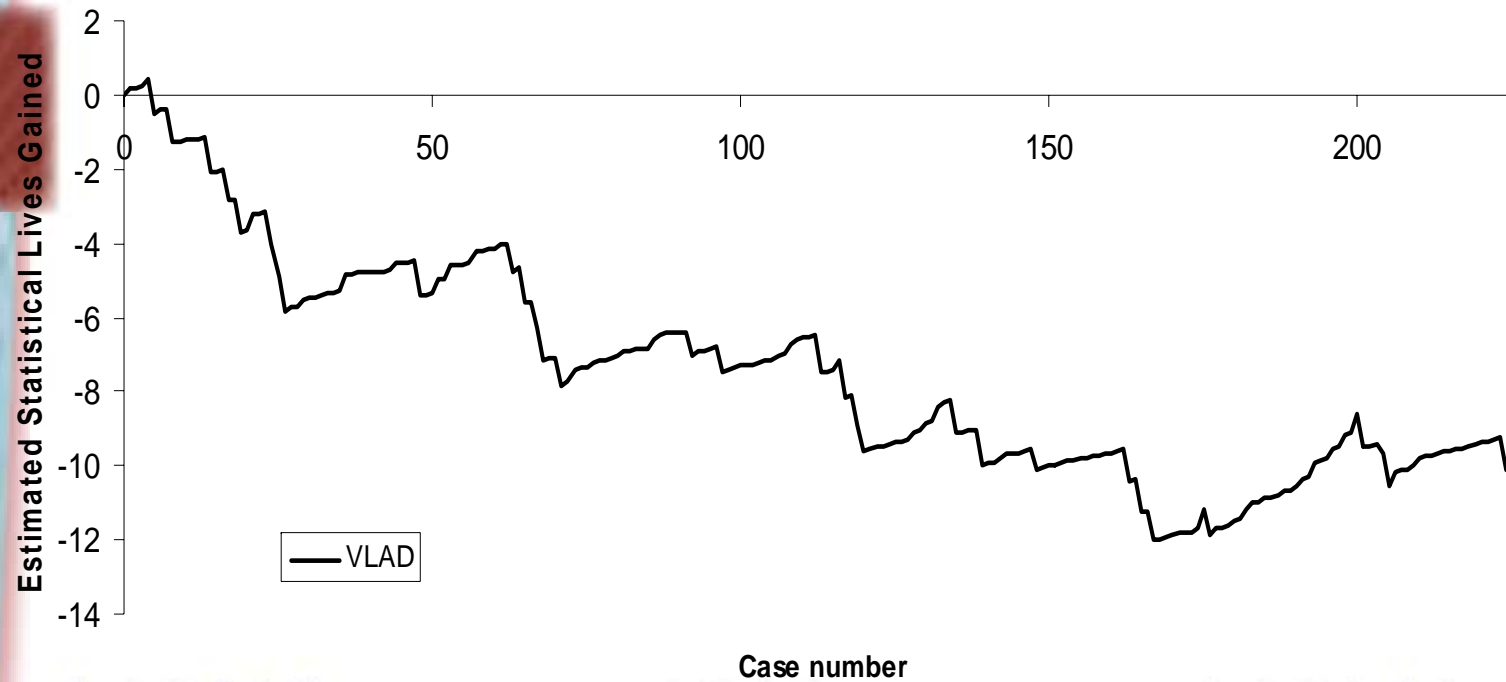
- Indigenous
- Age-sex utilisation rates
- Cultural and linguistic diversity
- Geographic
- Socio-economic status
- Standardised Mortality Ratio of people aged <70 years
- Private Hospital Substitution Index

# Describing patients

- Probably one of the major advances in management technology in health sector in last 30 years has been development of Diagnosis Related Groups (DRGs) classification (and spin-offs for other types of hospital services)
- This means we can describe hospital patients, which means we can pay hospitals the same if they treat the same patients
- Casemix funding model to be phased in for 21 biggest hospitals from 1 July 2007

# Describing what goes wrong: Variable Life Adjusted Display

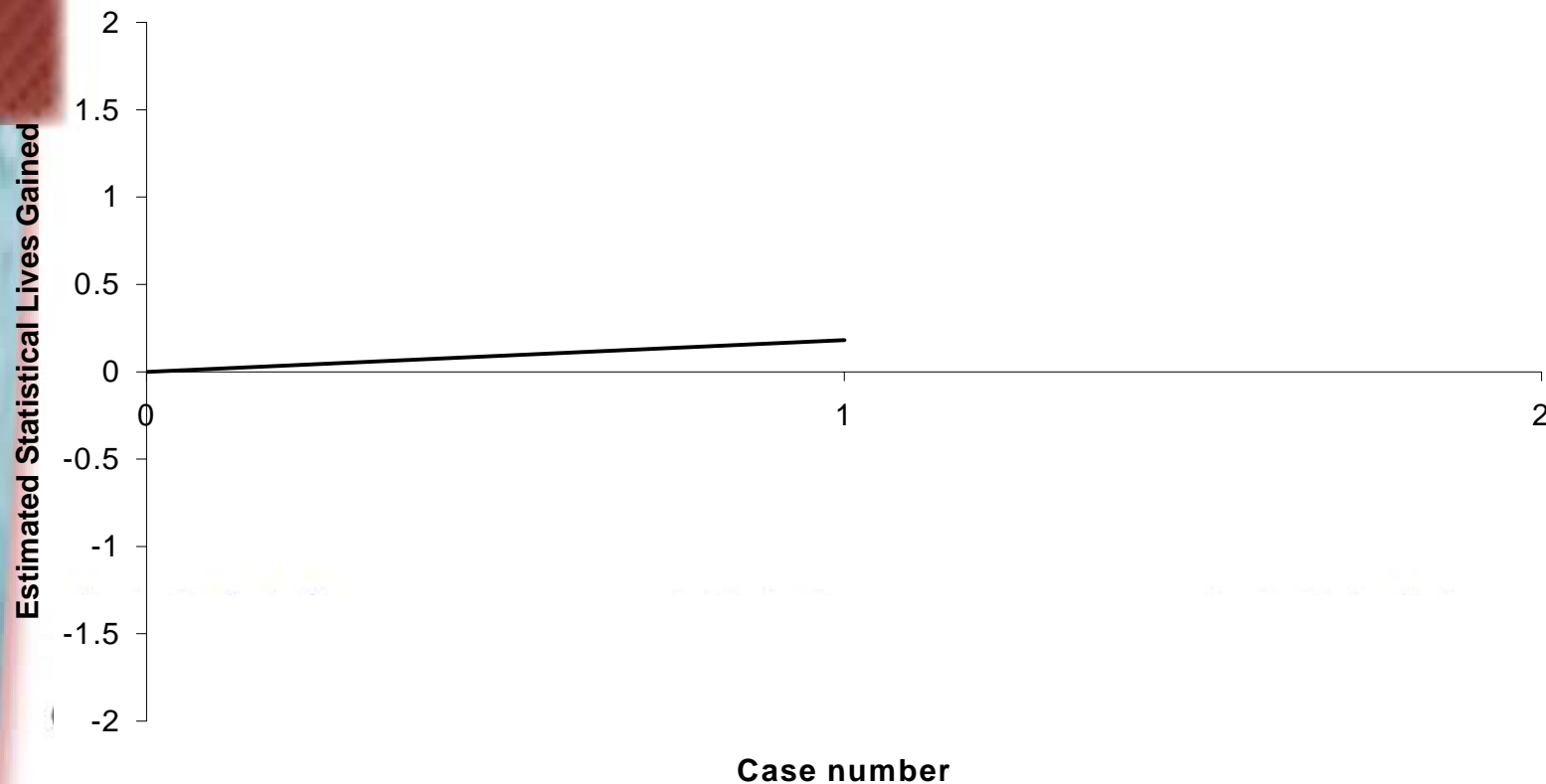
AMI VLAD - (01 July 2003 - Latest Data Extract)



# Variable Life Adjusted Display (VLAD)

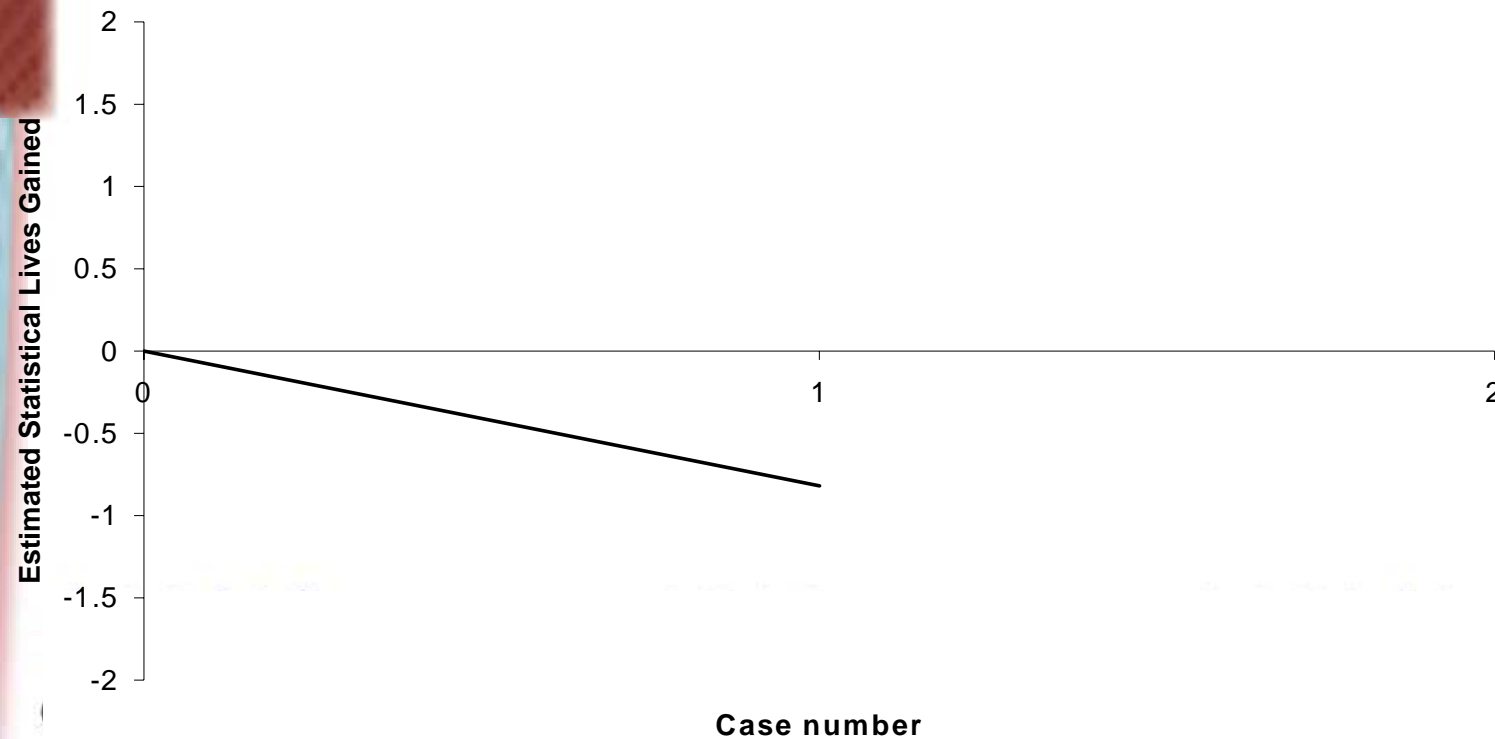
Patient Survives -  
the probability  
dying

VLAD increases by  
of the patient



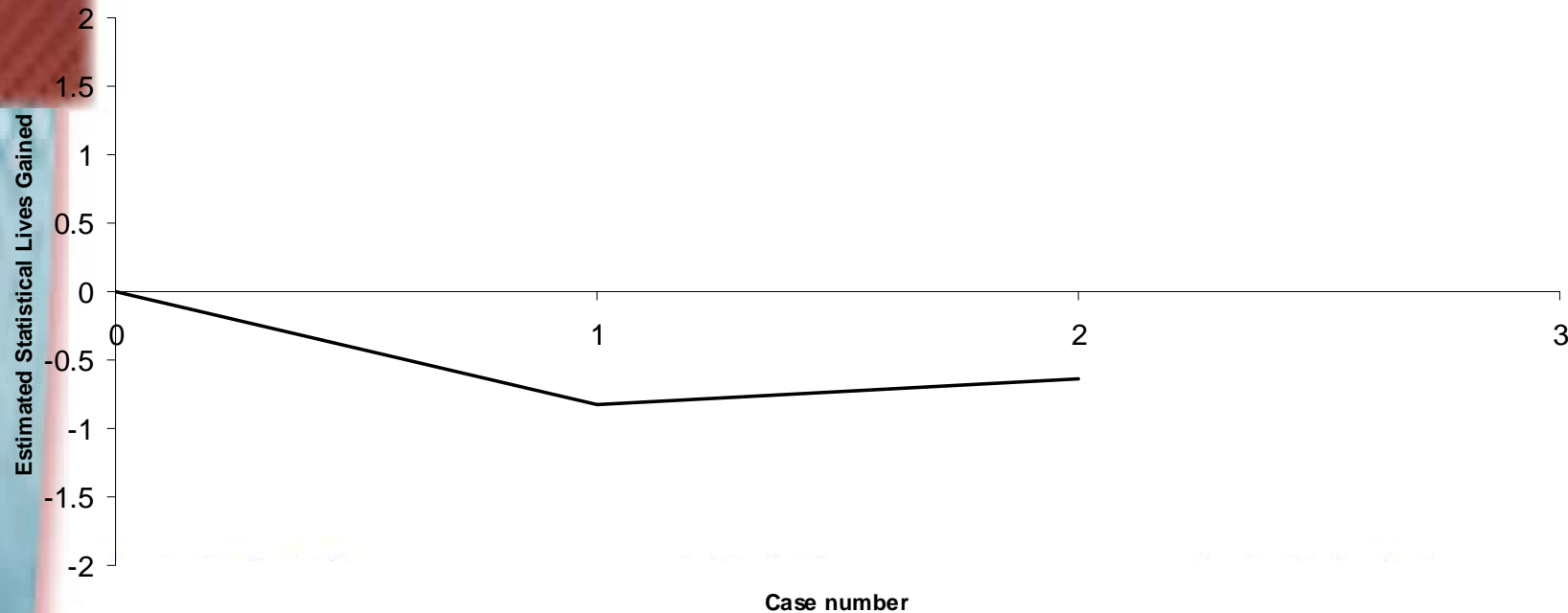
# Variable Life Adjusted Display (VLAD)

Patient Dies - VLAD decreases  
by the probability of the  
patient surviving



# Variable Life Adjusted Display (VLAD)

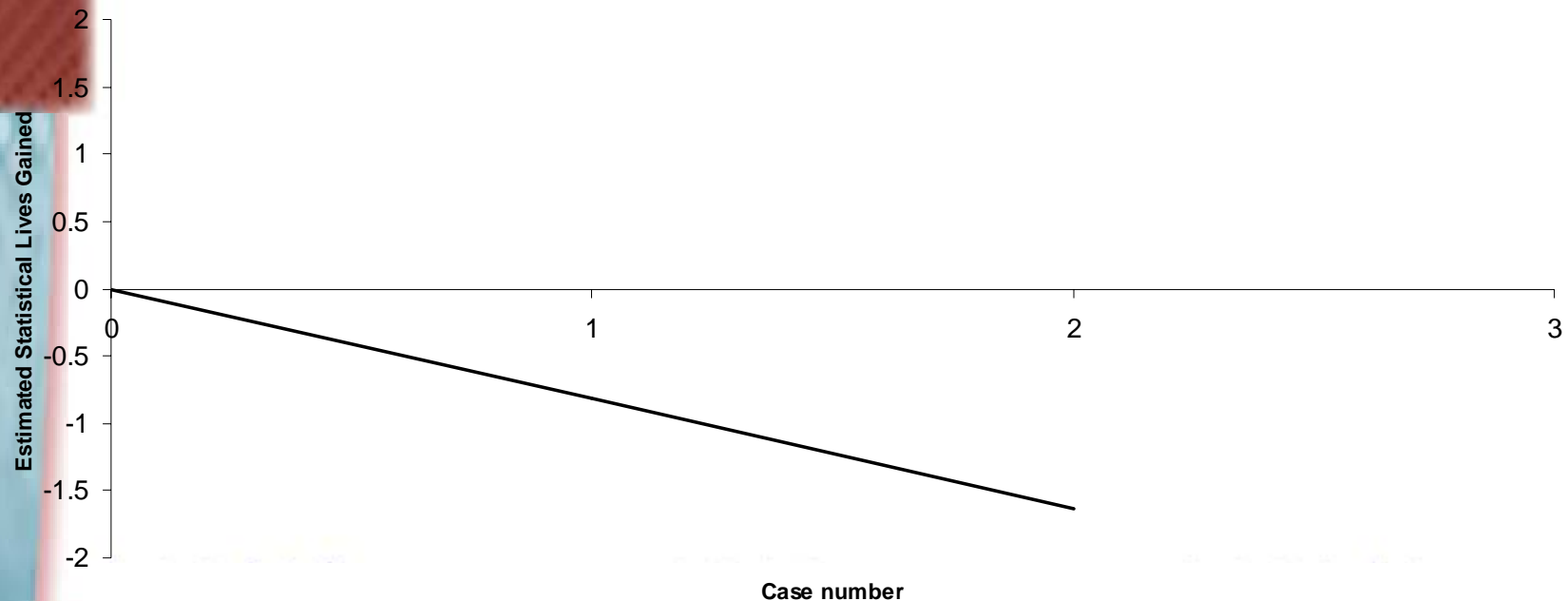
2<sup>nd</sup> patient survives - VLAD increases  
by the probability of  
the 2<sup>nd</sup> patient dying



# Variable Life Adjusted Display (VLAD)

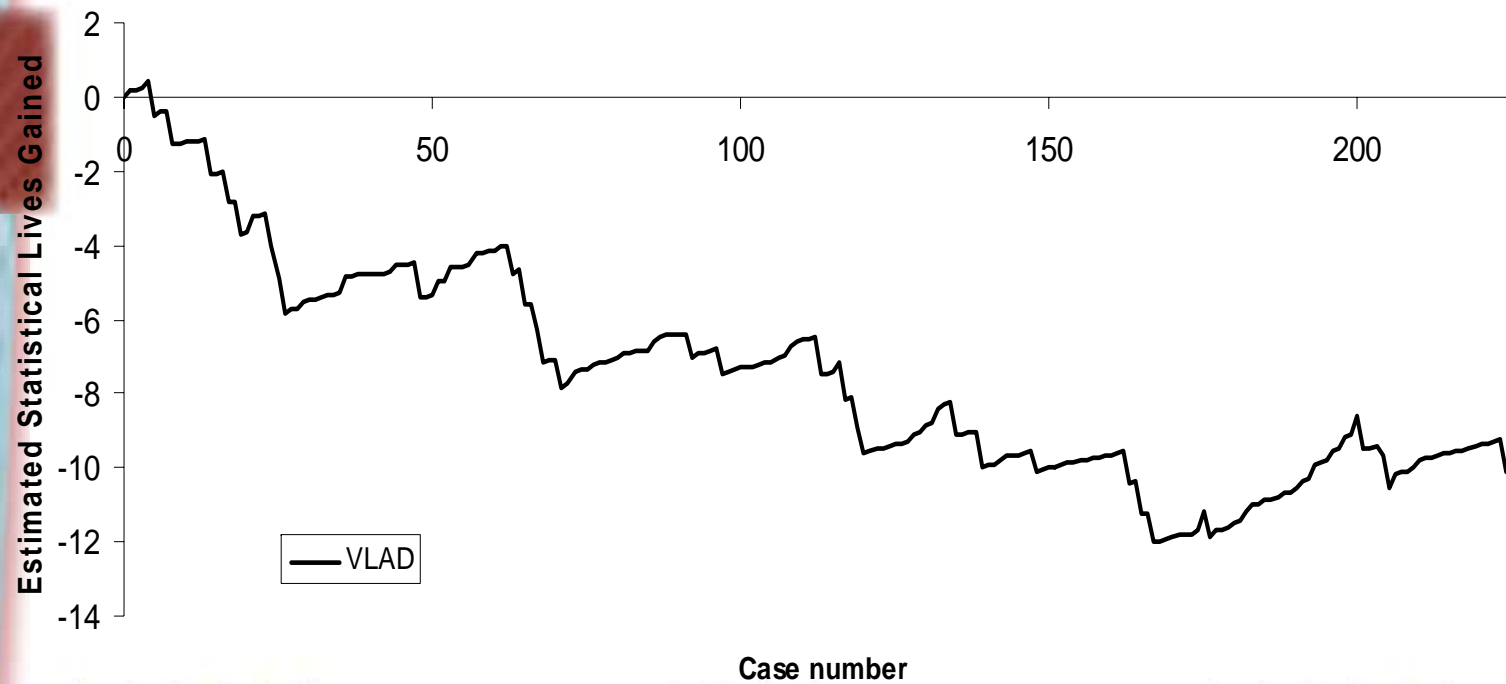
2<sup>nd</sup> patient dies  
by the  
the 2<sup>nd</sup> patient

- VLAD decreases  
probability of  
surviving



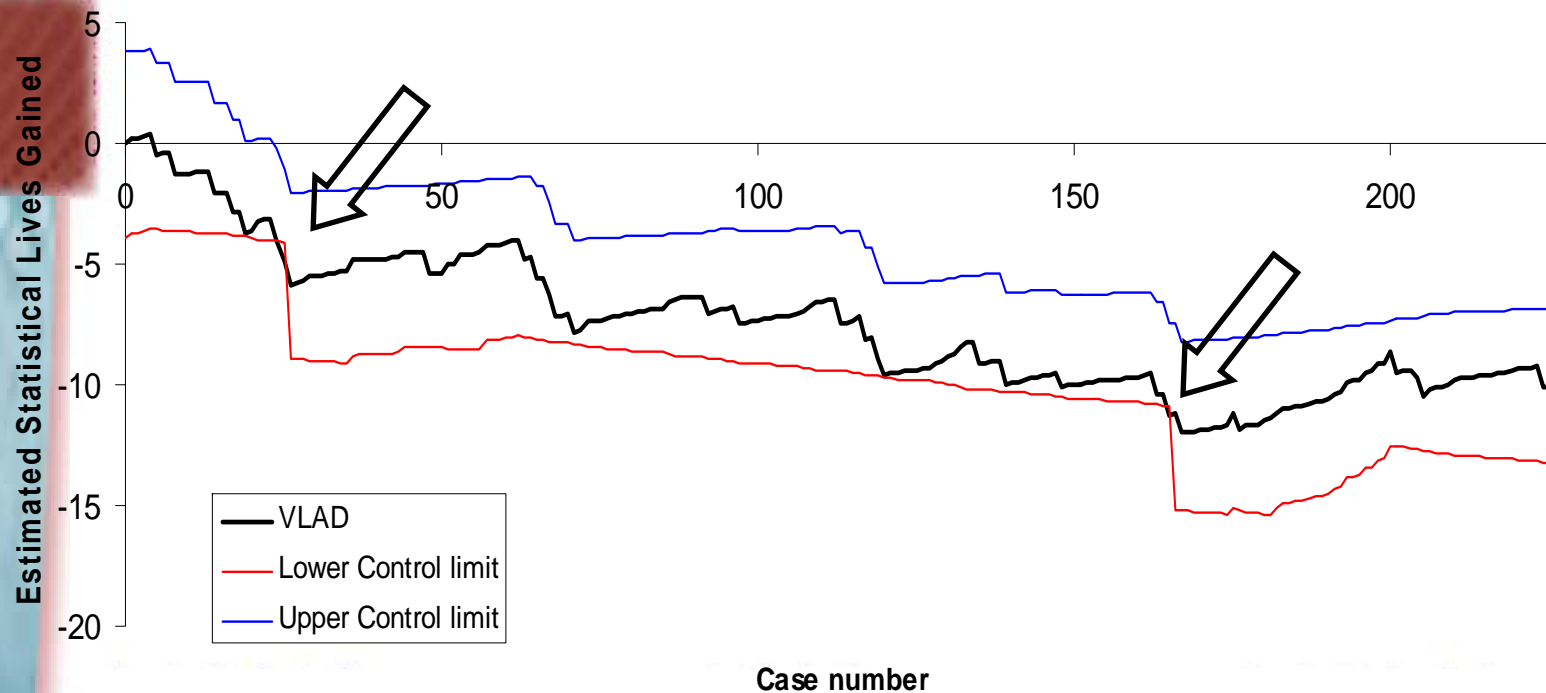
# Variable Life Adjusted Display

AMI VLAD - (01 July 2003 - Latest Data Extract)



# Variable Life Adjusted Display with control limits

AMI VLAD - (01 July 2003 - Latest Data Extract)

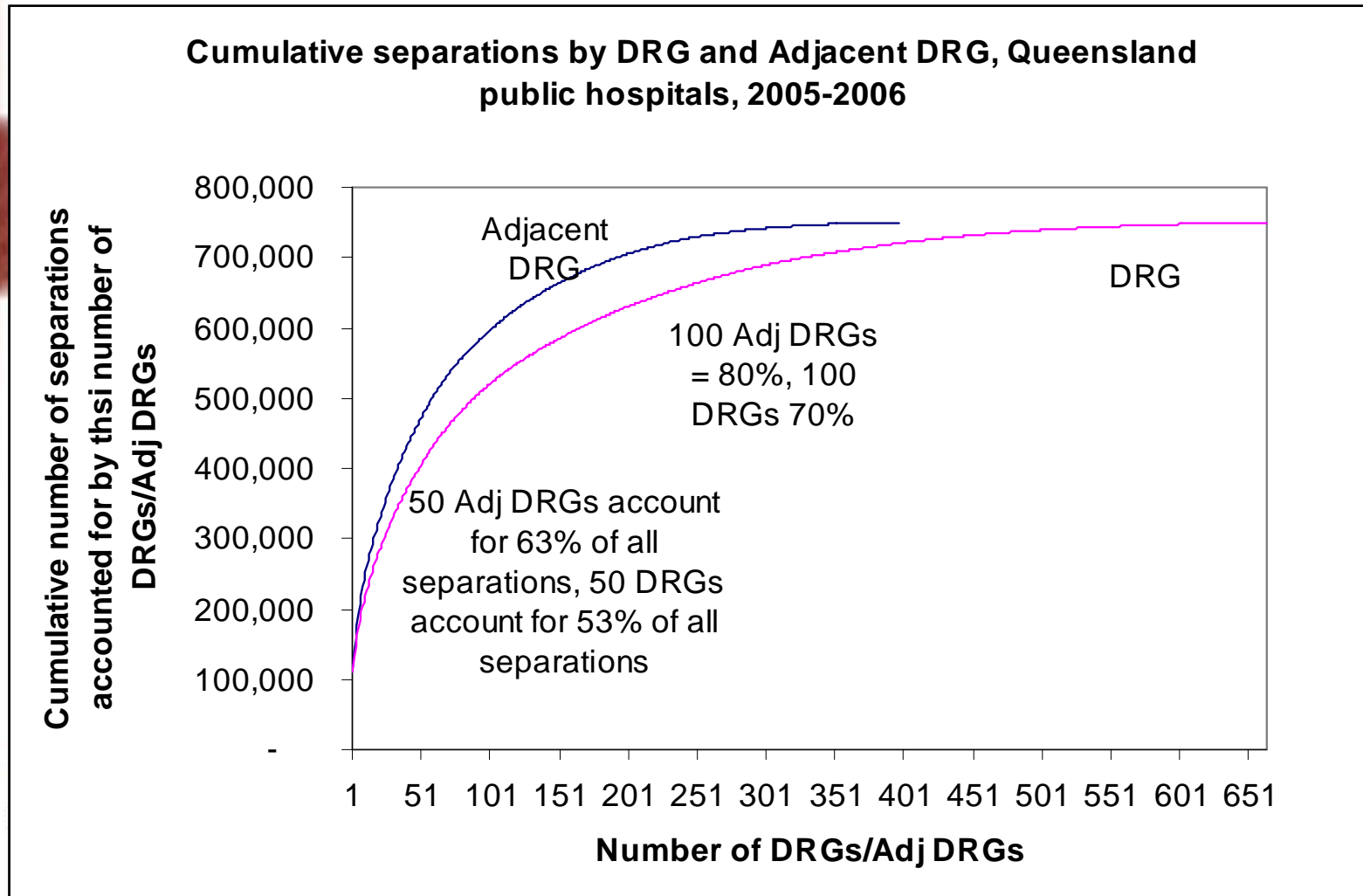


# Flagging criteria and related action specified by Queensland Health

Notification Level	Fatal Outcome Indicator*	Non-Fatal Outcome Indicator*	Action Required
1	30%	50%	Hospital should investigate internally and report outcome to Area Clinical Governance Unit or Private Health Unit (for private facilities)
2	50%	75%	Area Clinical Governance Unit / Private Health Unit should be involved in investigation
3	75%	100%	Report to Patient Safety and Quality Board through the Area General Manager / Chief Health Officer required

# The number of care paths to be developed is quite small

(note some are same day DRGs)



# Describing what ought to happen with patients

## Cardiac patients:

- Acute Coronary Syndrome - Appropriate Beta blocker prescribed on patient discharge
- Heart Failure - ACE or ARB inhibitor on patient discharge

## Cancer patients:

- Breast Cancer - patients referred to a Multidisciplinary Team

## Renal patients:

- Incident patients commencing renal dialysis with permanent access

# Clinical Practice Improvement Payment: Cardiac patients

- Collect data \$40
- Acute Coronary Syndrome -  
Appropriate Beta blocker  
prescribed on patient  
discharge \$100

# What we can't do routinely in Queensland (yet)

- Describe a person's pathway through the system
  - Anonymised person-based data (aka data linkage)
    - Link within existing data sets
    - Link other data sets
  - Rapid Learning System
    - The immediate cohort study
- Collect data as sensibly as we ought
  - Digital pens
  - As by-products of new clinical information systems

# The role of ICT in all of this?

- Large data sets require ICT support
- Large data sets can (and should) be mined to enhance their value
- Clever ICT/e-health applications can allow us to progress further (eg derived cancer staging)
- Clinical information systems can produce data as a by-product which can be used for describing and monitoring care

---

*Any questions?*

➤ [Stephen\\_Duckett@health.qld.gov.au](mailto:Stephen_Duckett@health.qld.gov.au)