

Scottish National Audit Project Community Acquired Pneumonia

SNAP-CAP

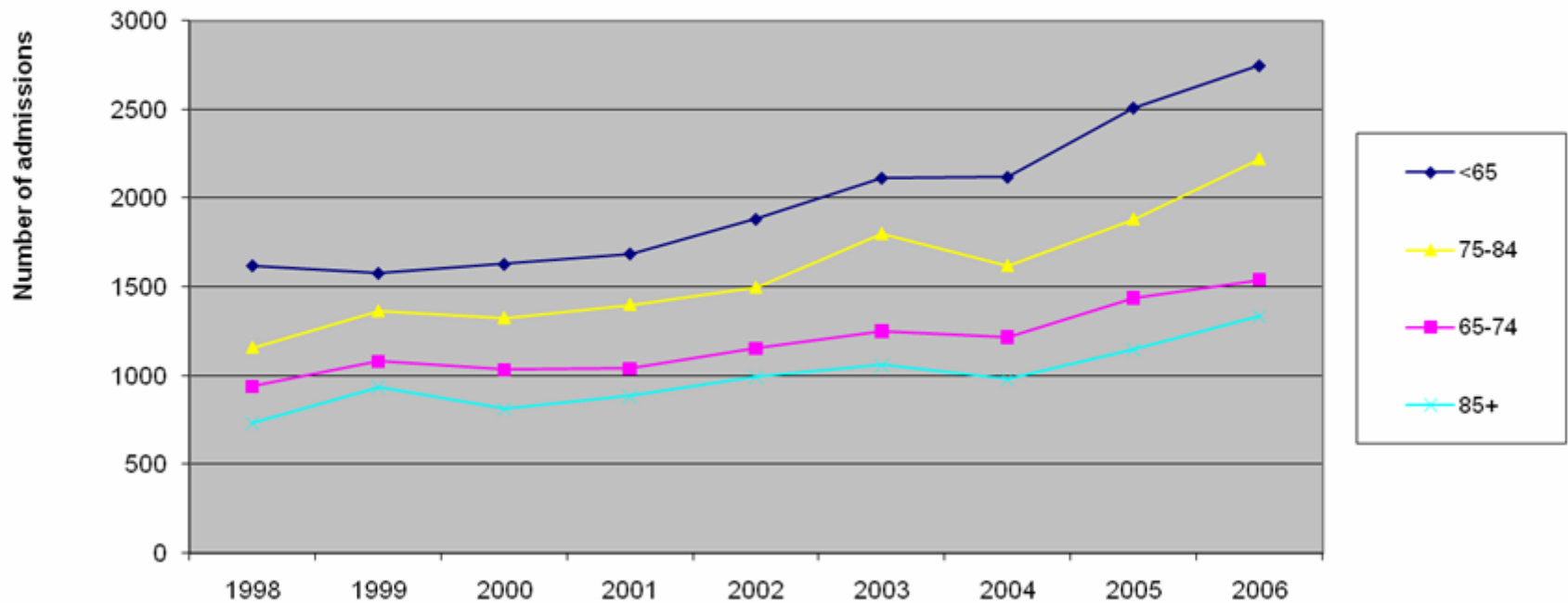
Analysis Plan

Information Request

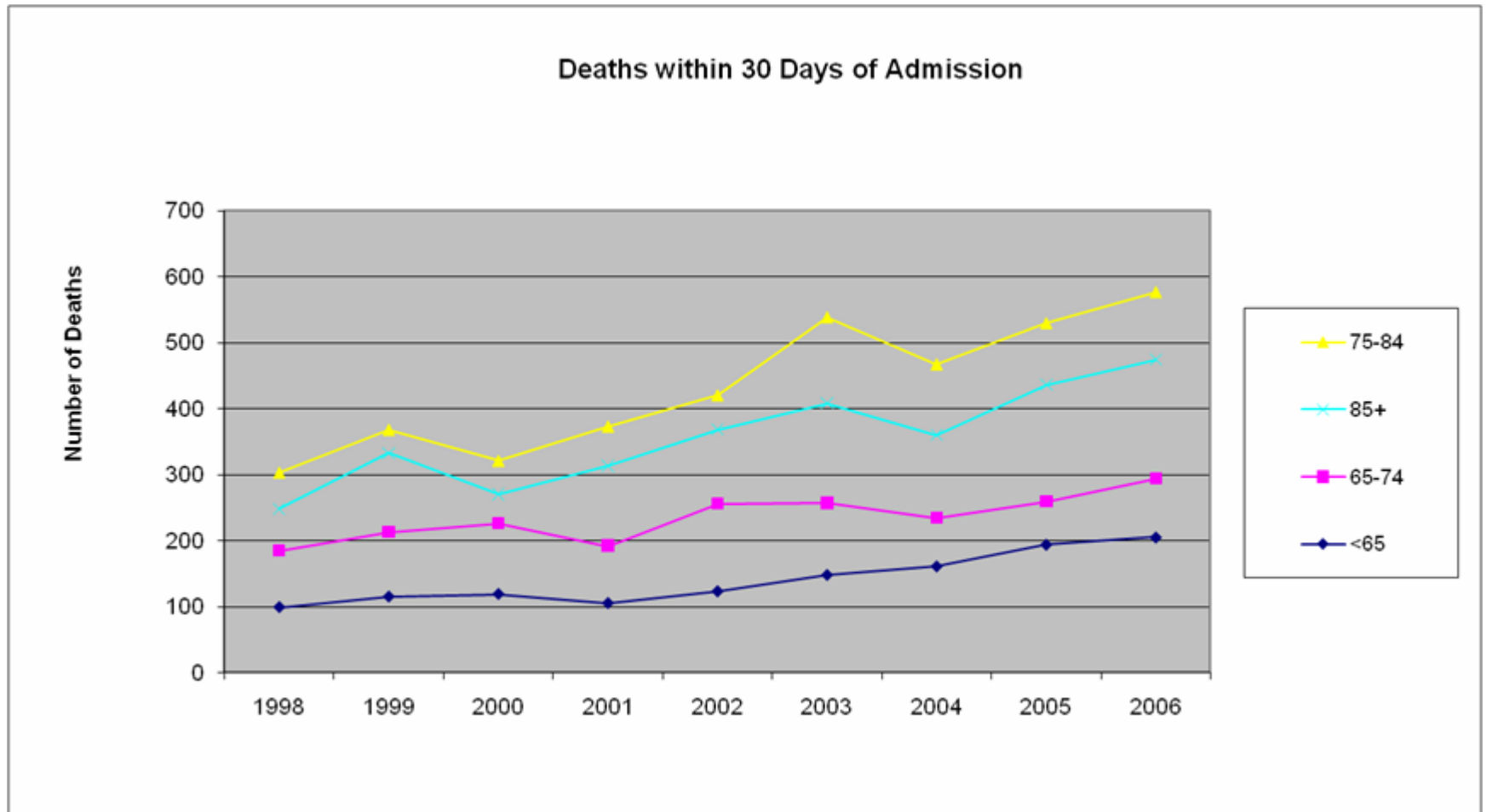
- J18.1 & J18.9 (486)
- SMR01 and GRO
- Admissions to all Scottish Hospitals from Jan 1998 – Dec 2006
- Admission / Discharge / Death dates
- Co-morbidities
- Age
- Scottish Index Multiple Deprivation
- Location

Admissions

Population: J18.1 & J18.9
Admitted between Jan 1998 - Dec 2006

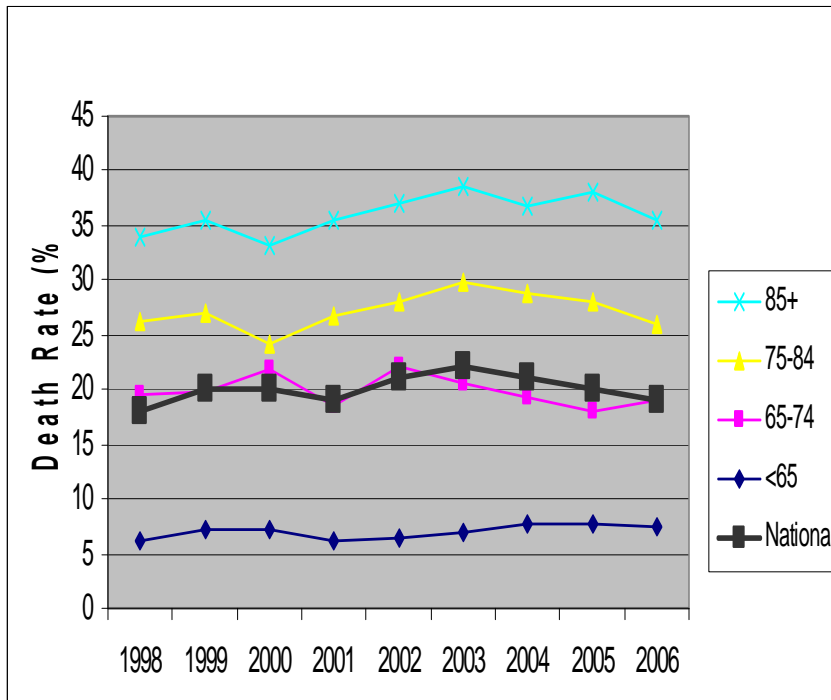


Death within 30 Days of Admission

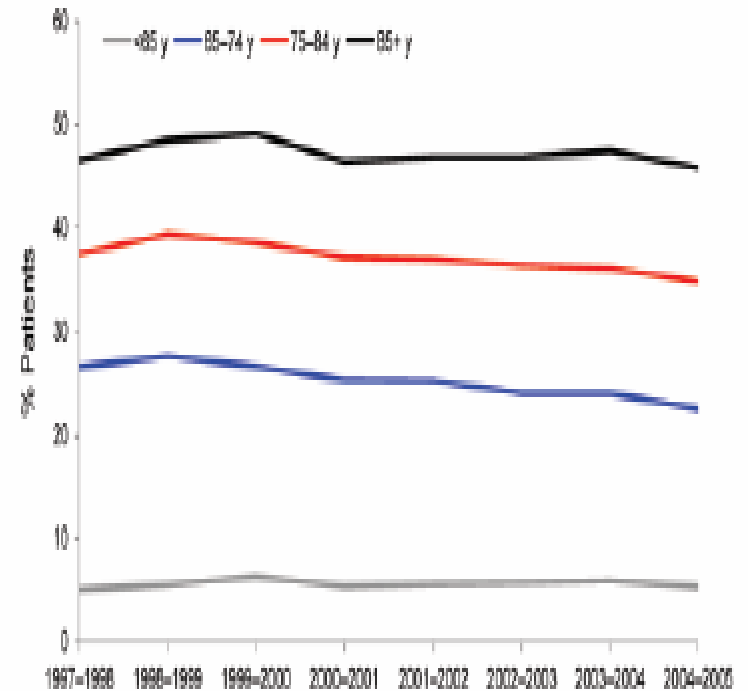


Death Rates

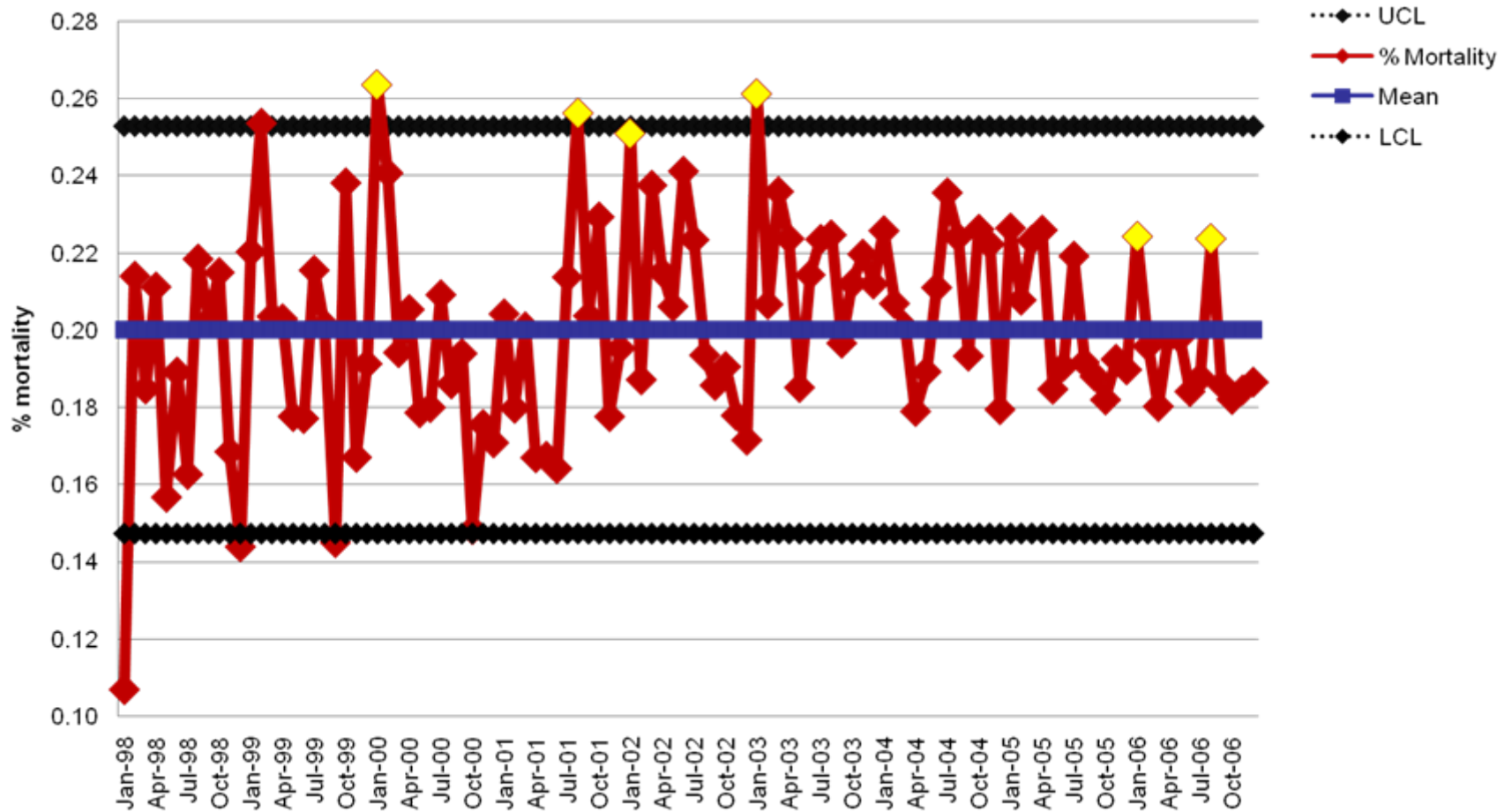
Death within 30 days of admission



Death within hospital 30 days after admission



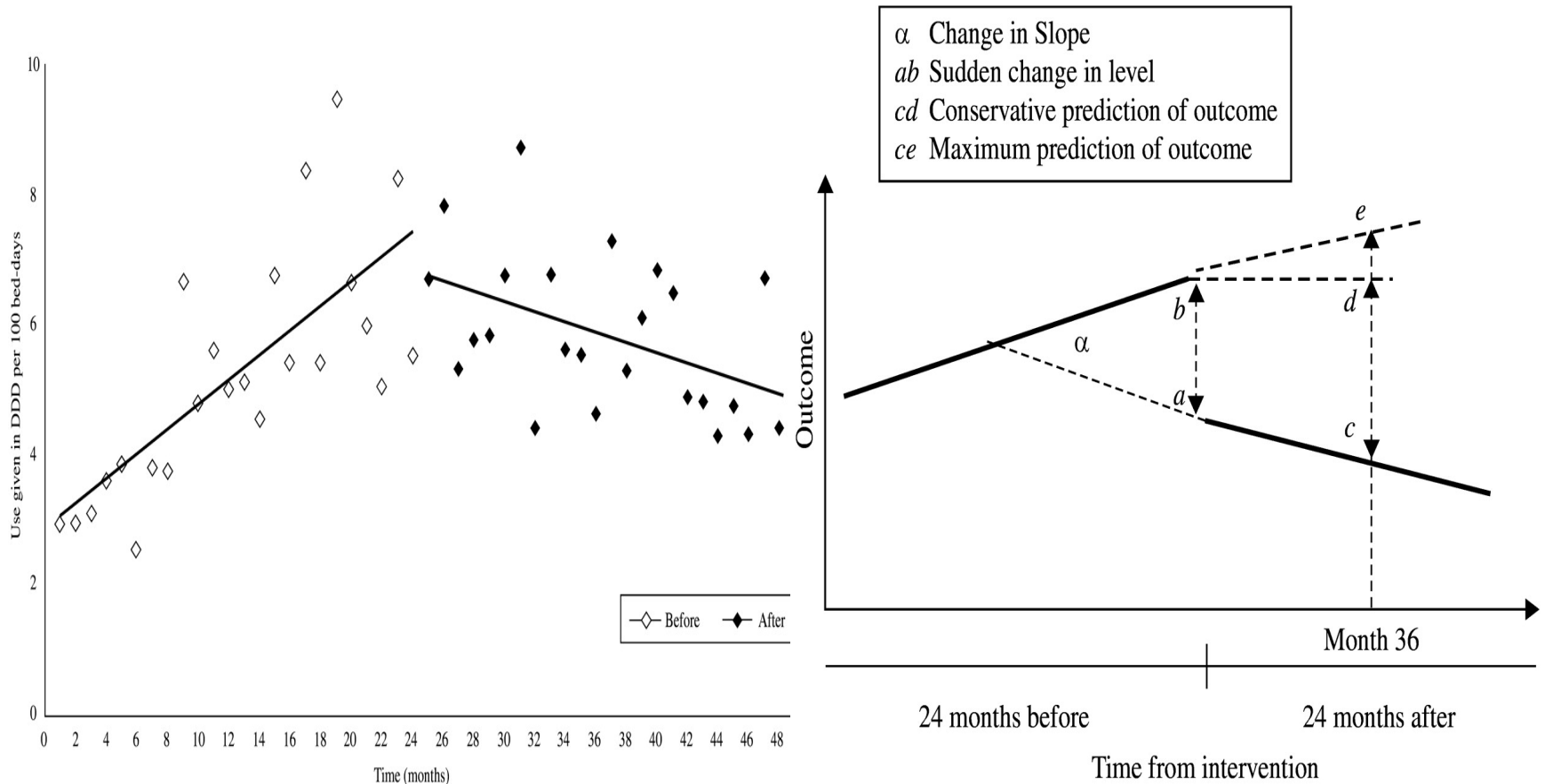
Control chart: % Mortality Jan 1998 - Dec 2006



Impact of CAP Care Bundle on Mortality

- A 20% change in
 - Average mortality rate
 - Post intervention slope
 - Post intervention level
- Power?

An example: Outcomes of an Intervention to Improve Hospital Antibiotic Prescribing

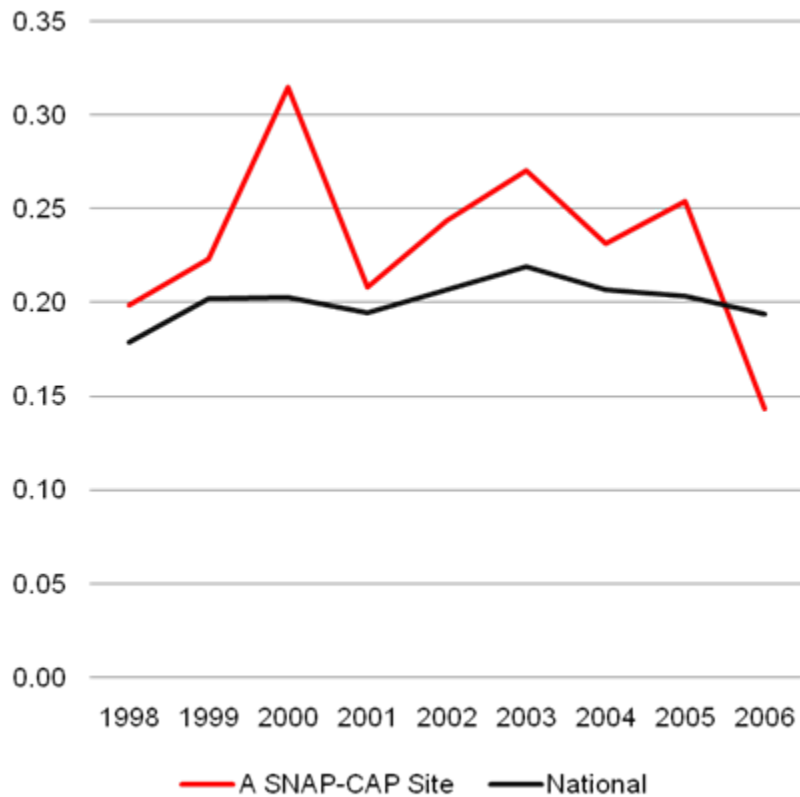


Ansari, F. et al. J. Antimicrob. Chemother. 2003 52:842-848;

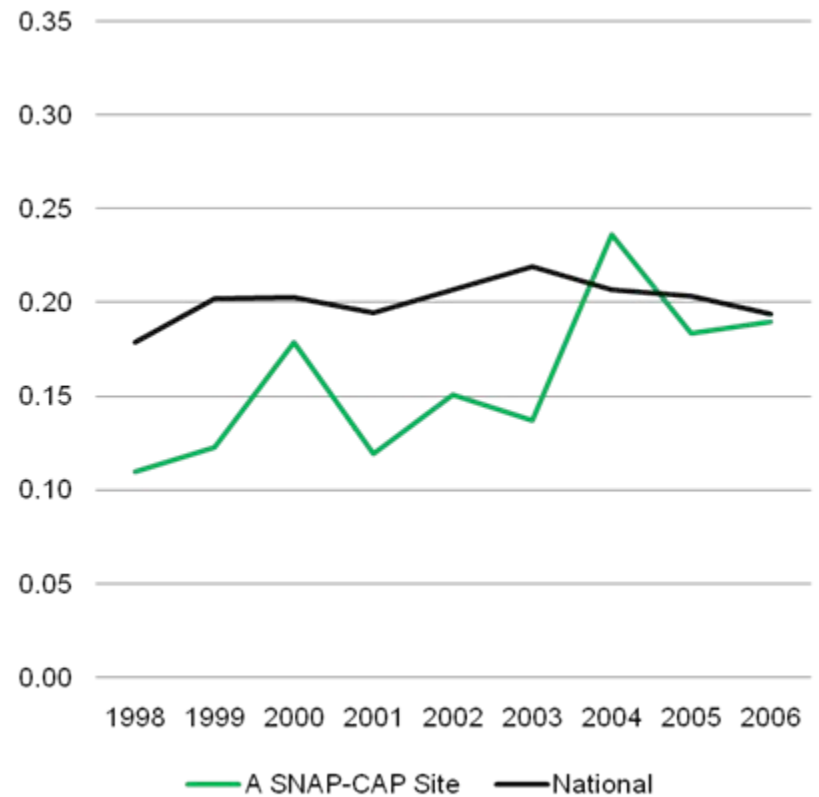
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SNAP-CAP Sites

% Mortality Decreasing



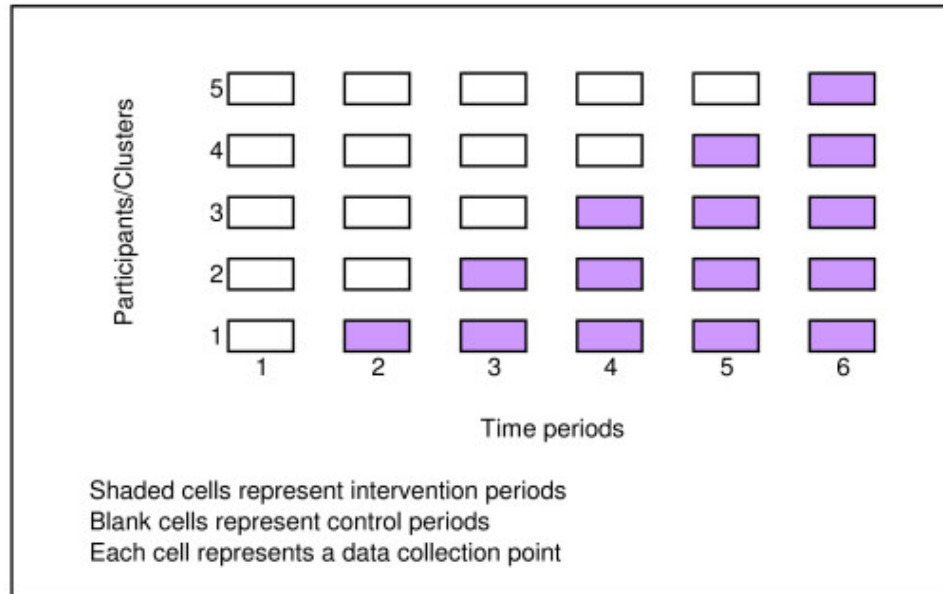
% Mortality Increasing



Randomised Cluster Design

- Variance between clusters
- Variance within clusters
- Intracluster correlation coefficient
- Sample size

Stepped Wedge Design



Brown & Lilford The stepped wedge trial design: a systematic review. *BMC Medical Research Methodology* 2006; **6**: 54.