

Reducing delirious discharges: results of a quality improvement program

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Delirium

- acute fluctuating disturbance of consciousness
 - hyperactive, hypoactive, mixed subtypes
- 10-50% hospitalized patients
- significant morbidity and mortality
- evidence for prevention and mx

Clinical Practice Guidelines for the Management of Delirium in Older People 2006.
Victorian Govt Dept Human Services

Setting

- Large general medicine service
 - >5000 admissions/yr, 65% aged 65+
 - High occupancy, exit block
 - Unit-based multidisciplinary teams
 - Cyclical admitting roster
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Aim

- 1) improve processes of care for delirious patients
- 2) decrease incidence of new delirium
- 3) decrease duration of delirium

Methodology

- Planning phase
- Intervention
 - Screening
 - Education
 - Changes to model of care
- Formal evaluation
 - Ward-level intervention
 - Concurrent control ward

Screening tool

- *cognitive impairment*
(AMT < 8/10 or MMSE < 24/30)
- *sensory impairment*
(visual or hearing impairment on history or assessment using visual acuity and whispered number test)
- *hyponatremia*
(serum sodium <130 mmol/L)
- *dehydration*
(urea/creatinine ratio > 75)

Inouye S VC, Horwitz R et al. Annals of Internal Medicine 1993;119(6):474-481

	DELIRIUM DIAGNOSIS 1 AND 2	Tick if present
1	Change in mental state from baseline with acute onset AND fluctuating course during the day	
	AND	
2	Difficulty focusing attention and easily distracted.	

	AND EITHER 3 OR 4	
3	Evidence of disorganised or incoherent thinking	
	OR	
4	Altered Level of Consciousness	

Education

Project staff

- in-services nursing & MDT staff
- 1:1 training nursing assistants and volunteers
- 1:1 family & carers
- education folder
- posters, pamphlets

Intervention consultants

- case based sessions nursing
- junior medical staff
- guidelines management agitated patient
- guidelines management sleep-wake disturbance

I Institute one on one nursing
F Family / friends assist

C Communication style
R Routine (Timed mobilization/activities)
O Orientation (lighting, noise, calendar / clock)
S Safety (low beds, sides down, hazards)
S Sleep relaxation

I Initiate medication plan
F Frequency of titration

D Dose including maximum daily dose
R Review time (max 4th hourly) and items (e.g. agitation)
U Use when
G Guard against (side effects, monitoring)

Intervention

Bed flow

- fast track to intervention ward
- delirium bay

Staffing

- additional nursing assistant (AIN)
- volunteers
- family and carers

Practice

- targeted assessment - reversible risk factors and minimization complications
- behaviour management charts; trouble shooting prompt cards

Enrolment

451 pts aged 65+
admitted to study units

219 eligible and consented

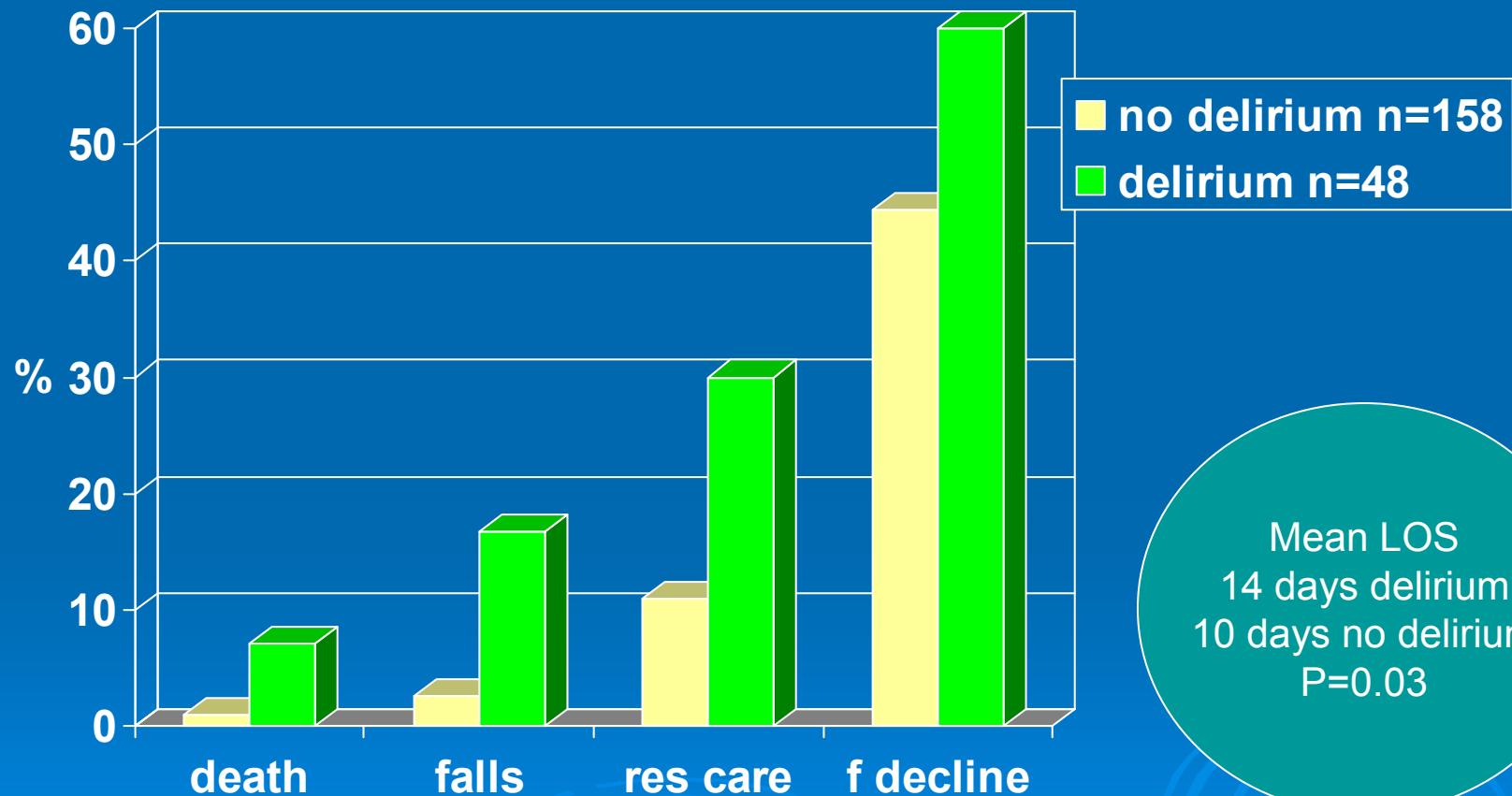
92 intervention ward

- 61 "at risk"
- 20 delirium

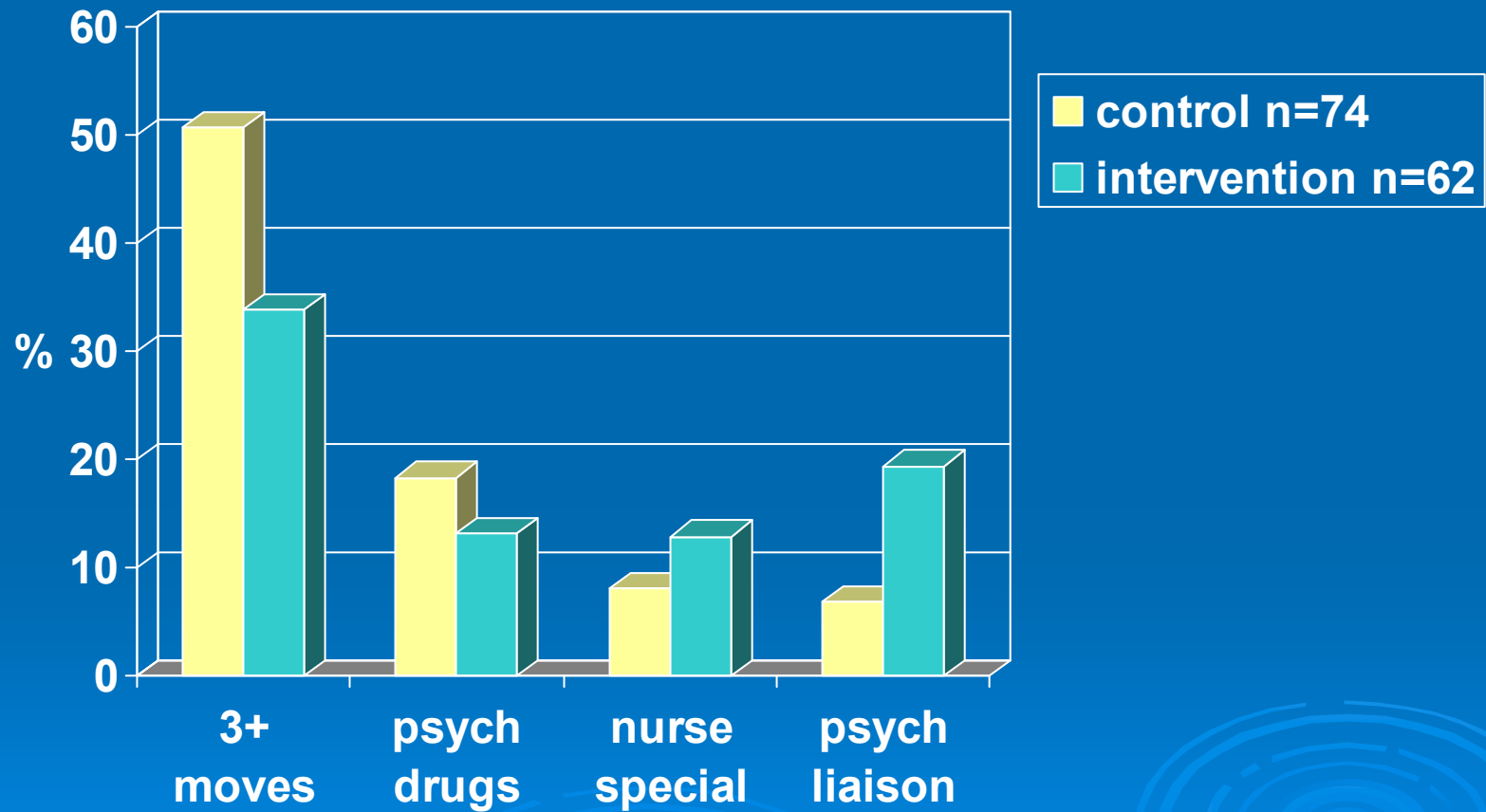
127 control ward

- 71 "at risk"
- 27 delirium

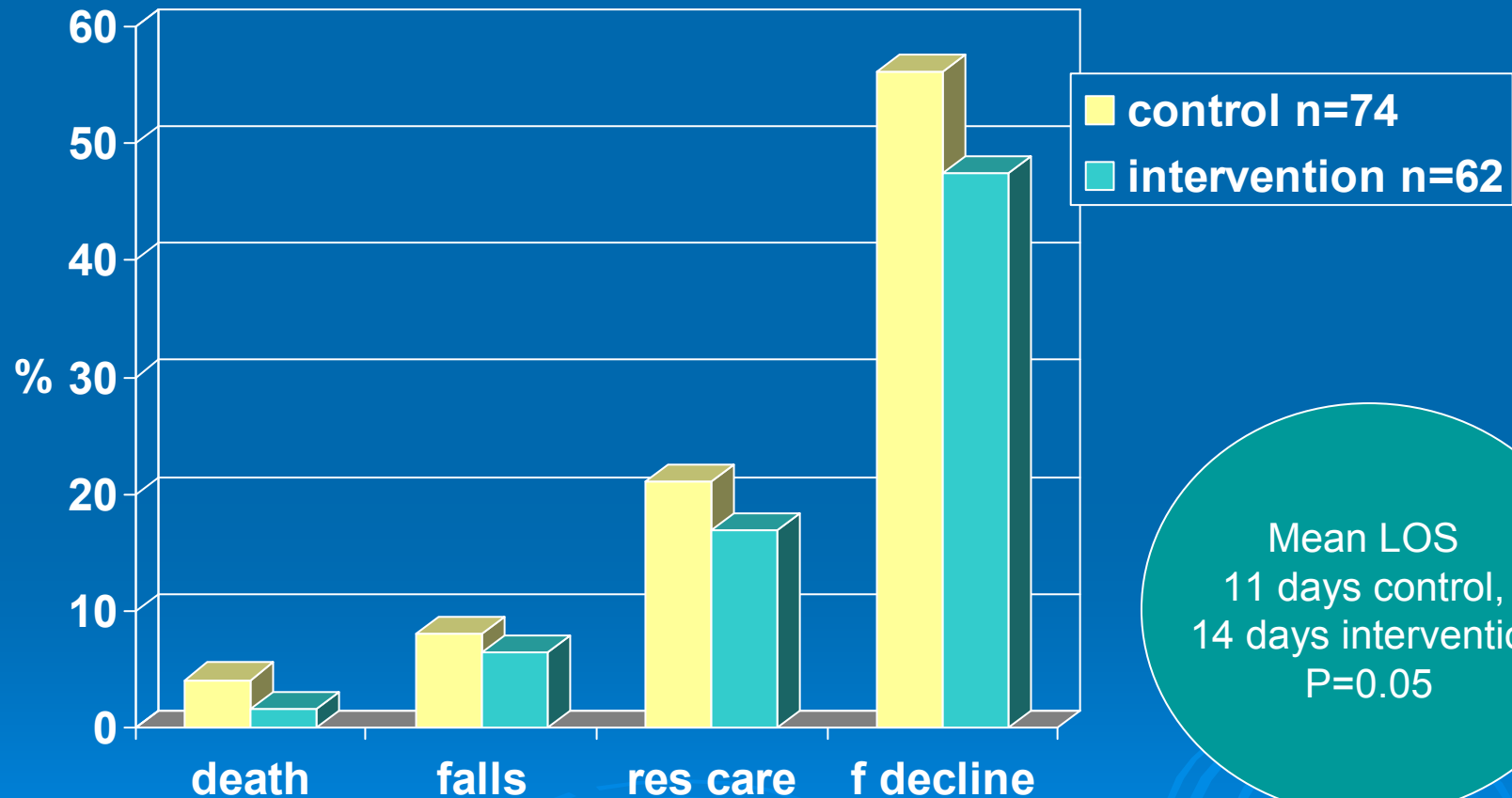
Outcomes: delirious pts



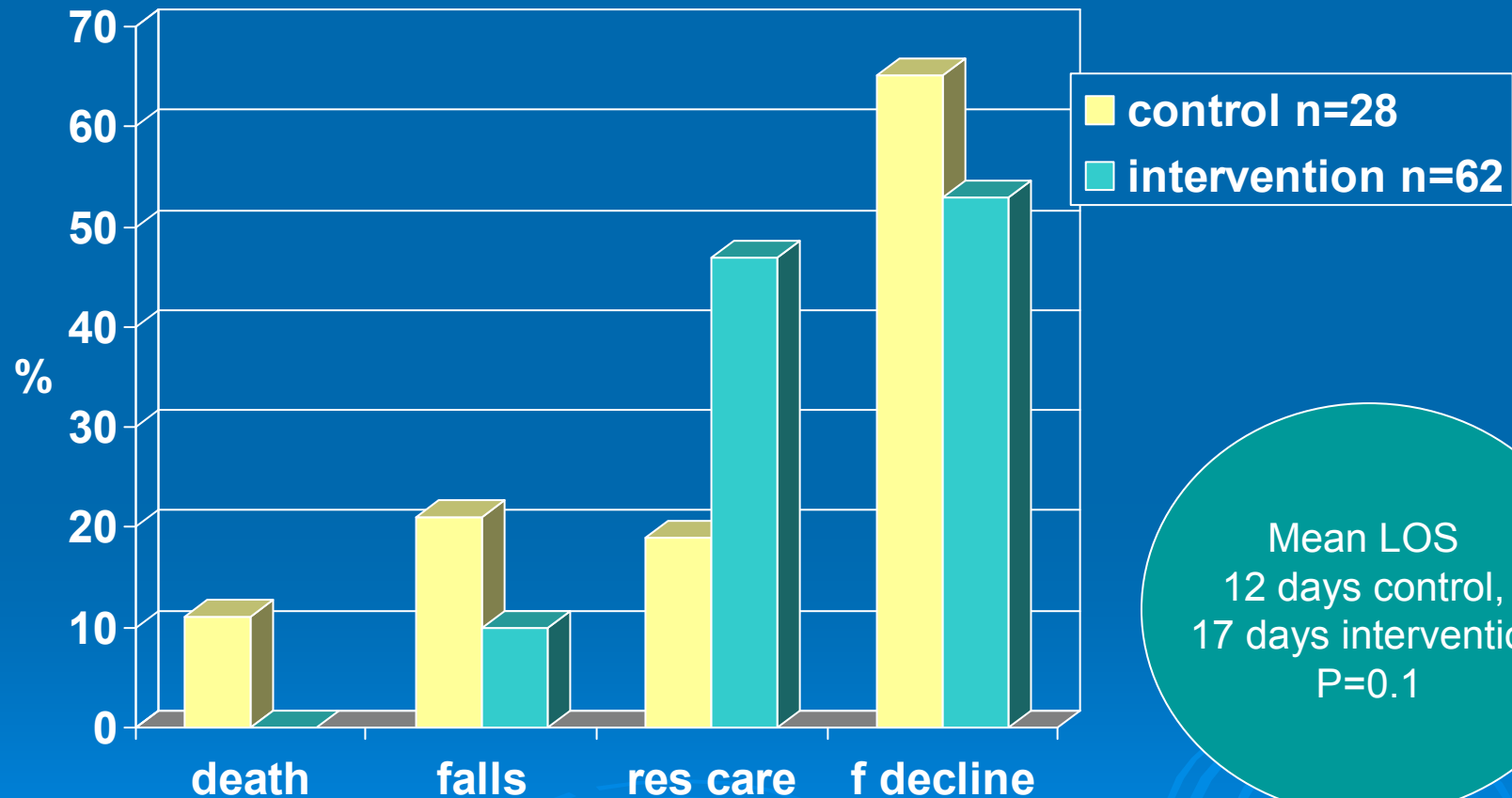
Processes: at risk subgroup



Outcomes: at risk subgroup

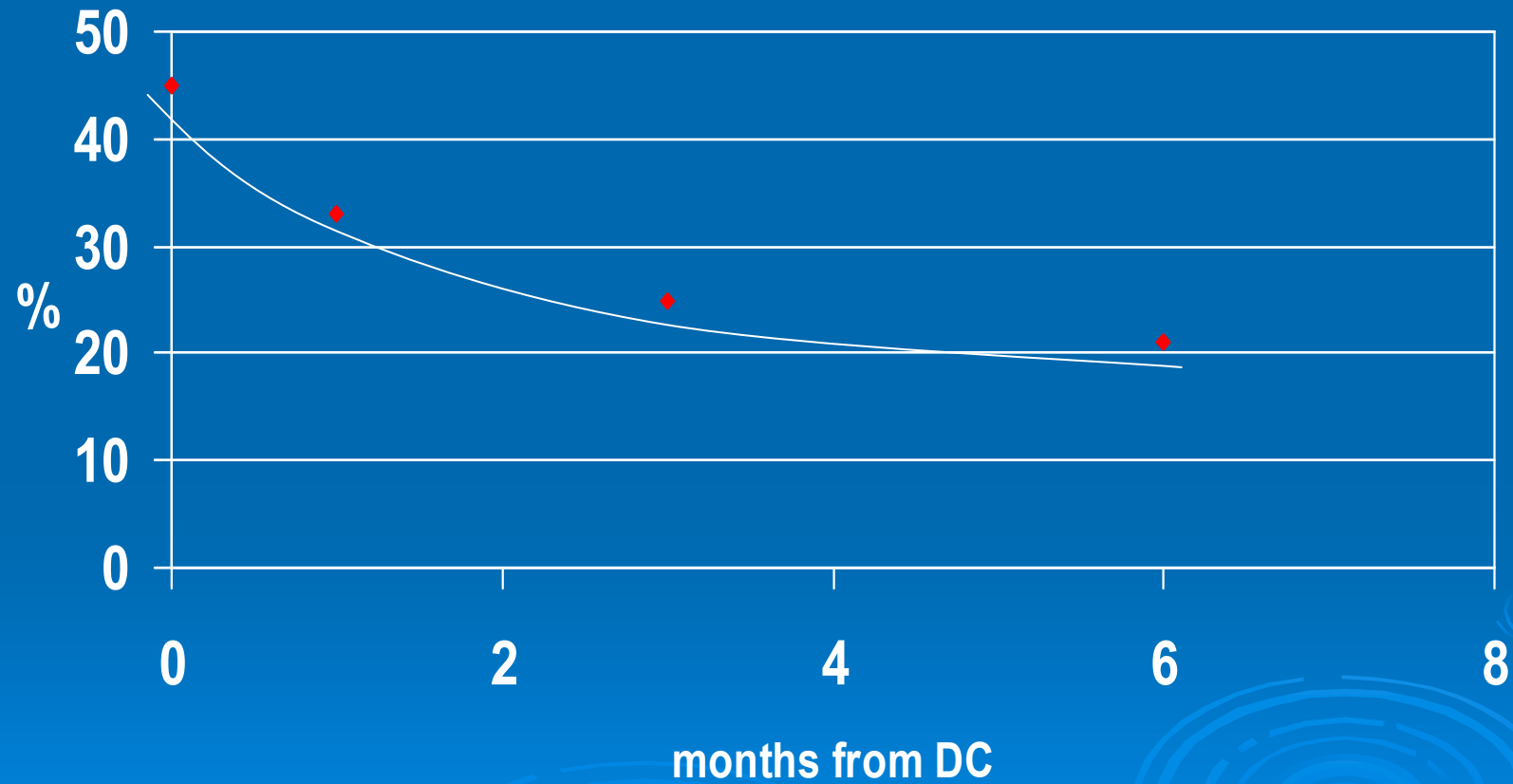


Outcomes: delirium subgroup



Only 25% control group had resolved delirium at discharge (63% i/vention)

Combined proportion with persistent delirium



Outcomes of persistent delirium

- Significantly greater risk of
 - Complications (esp falls and pneumonia)
 - Rehospitalisation
 - Remaining in facility
 - 6 month mortality (adjusted for age, comorbs)
 - Marcantonio, Kiely, Simon et al JAGS 2005
- Mortality related to duration of delirium
 - Kiely, Marcantonio, Inouye et al JAGS 2009

In summary

- Almost all delirium was prevalent
 - Screening issues
 - Existing MDT model of care
 - Consent issues
- Delirium was associated with poorer outcomes
- The intervention reduced discharge of delirious patients (at the expense of ↑LOS)

Thanks to...

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- Staff and patients of internal medicine
RBWH
- Queensland Health Strengthening Aged
Care program