

# Falls Quality Indicators

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# Successful RCTs in falls prevention

<p><u>Community dwelling populations</u>  <i>Single Interventions</i>          Wolf (US) 1996          Campbell (NZ) 1997          Buchner (US) 1997          Robertson (NZ) 2001          Barnett (Aus) 2003          Lord (Aus) 2003          Means (US) 2005          Li (US) 2005          Skelton (UK) 2005</p>	<p><b>Exercise</b></p>	<p><u>Emergency Department attendees</u>  <i>Single Interventions</i>          Kenny (UK), 2001  <i>Multifaceted Interventions</i>          Close (UK), 1999          Davison (UK), 2005</p>
<p>Campbell (NZ) 1999          Cumming (Aus) 1999          Nikolaus (Ger) 2003          Harwood (UK), 2005          Campbell (NZ) 2005          McKiernan (US) 2005          Pitt 2007 (Aus) 2007          Harran (Aus) 2009</p> <p><i>Multiple Interventions</i>          Hornbrook (US), 1994          Day (Aus), 2002          Clemson (Aus) 2002          Swanenburg (Swi) 2007 (n=24)</p> <p><i>Multifaceted Interventions</i>          Tinetti (US) 1994          Wagner (US), 1994          Spice (UK) 2009</p>		<p><b>Other</b></p>
		<p><u>Care Home Residents</u>  <i>Single Interventions</i>          Bischoff (Swi), 2003          Flicker (Aus), 2005          Zermansky (UK), 2006          Broe (US), 2007  <i>Multifaceted Interventions</i>          Ray (US), 1997          Jensen (Swe), 2002          Becker (Ger), 2003          Neyens (Nlds), 2009</p>

# Cummings – BMJ 2008

- **Cluster randomised study**
- **3999 participants in Aged Care and Rehab ward**
- **I: 25hrs of nursing and physio input for 3 months – assessment and intervention**
- **It didn't reduce falls**

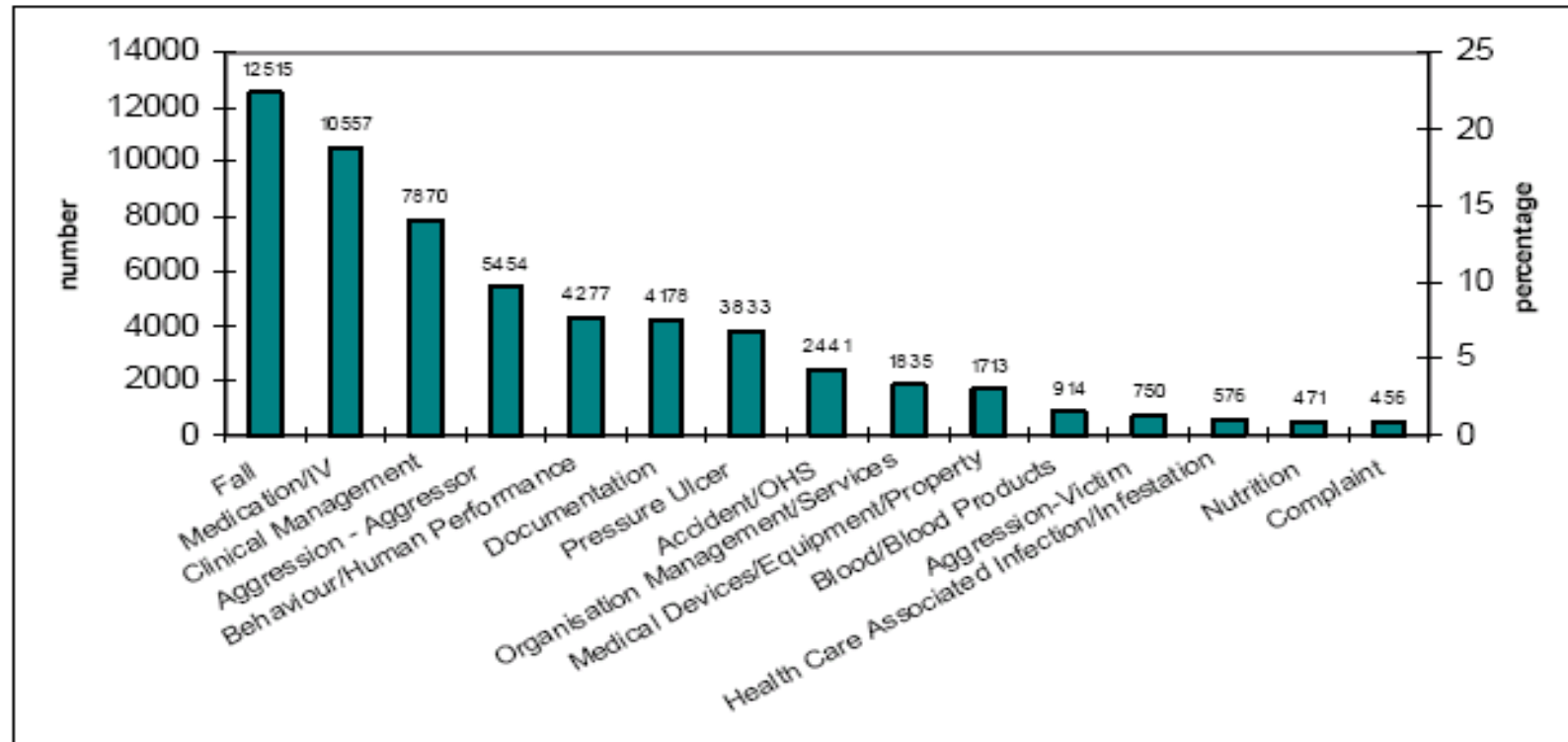
Table 4 | Incidence rate ratios for falls in all wards, in acute elderly care wards only, and in rehabilitation wards only

Variable	Intracluster correlation coefficient	Incidence rate ratio* (95% CI)	P value
All wards:			
Unadjusted	0.014	1.02 (0.70 to 1.49)	0.92
Adjusted for length of stay and previous falls	0.003	0.96 (0.72 to 1.28)	0.78
Acute elderly care wards:			
Unadjusted	0.007	1.06 (0.63 to 1.76)	0.83
Adjusted for length of stay and previous falls	0.001	0.96 (0.68 to 1.37)	0.83
Rehabilitation wards:			
Unadjusted	0.002	0.92 (0.64 to 1.32)	0.64
Adjusted for length of stay and previous falls	0.006	0.95 (0.65 to 1.40)	0.81

All models are based on negative binomial regression using generalised estimating equations to adjust for clustering.  
\*Ratio of fall rate in intervention wards to rate in control wards.

# CEC Data

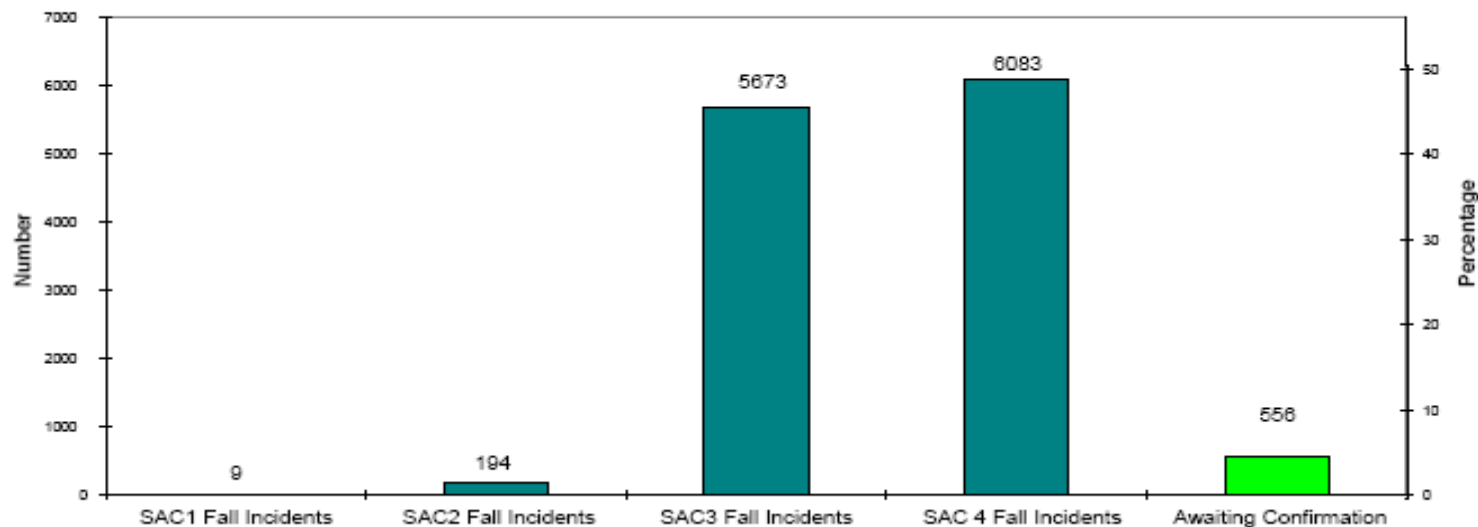
Figure 1: Clinical Incidents by Principal Incident Type January-June 2008



Note: PITs not included in graph are: anaesthesia, obstetric-foetal and obstetric-maternal. The complaint PIT indicated was selected from the clinical notification form.

# CEC Data

Figure 8. Fall incidents across SAC categories January to June 2008



## Learning

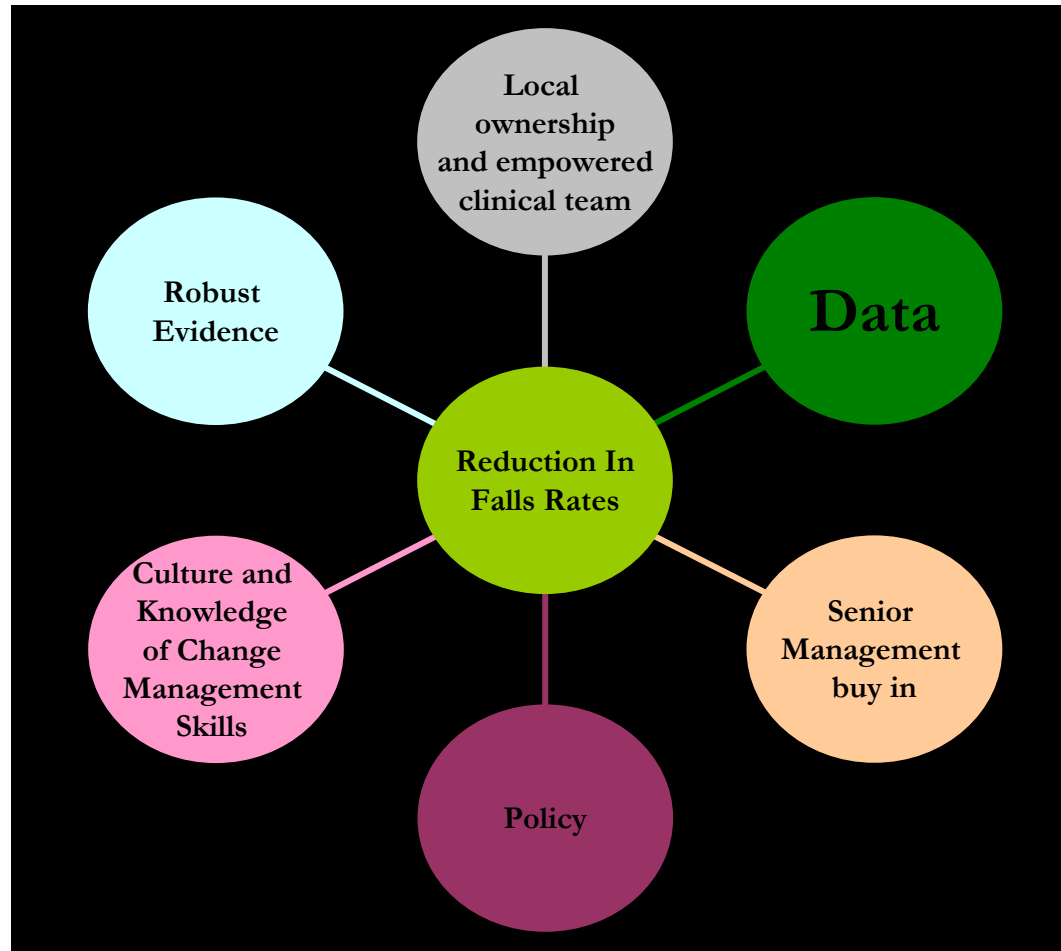
Issues identified during analysis of these incidents include:

- the effect of medication on fall risks
- equipment aids to support patients moving around the ward safely
- staff rostering and specialised training
- strengthening policies and staff education relating to post-fall management.

# **In-patient falls – what we used to do**

- **Fill in an IIMS report (with limited belief that it is worthwhile)**
- **Use data at a system level for performance management**
- **Use a fall as the trigger for future prevention**
- **Focus on aged care wards**
- **Don't discuss incidents in a timely manner**
- **Use physical / mechanical and chemical restraint**

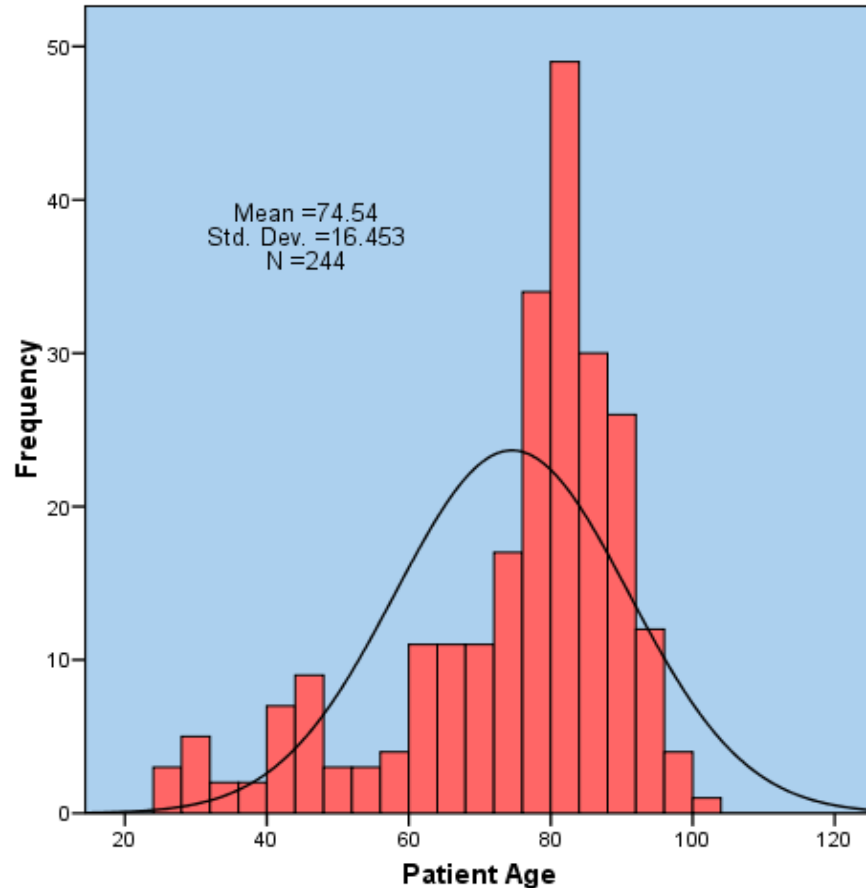
# Health Service Improvement Life Beyond the RCT



# Health Service Improvement Program

- **Identify a problem and the drivers for change**
- **Executive support and sponsorship**
- **Clinical leadership, ownership and accountability**
- **Identify key stakeholders**
- **Use data to understand problem and evaluate outcomes**
- **Education and support to enable teams to make changes**
- **Open discussion and learning from adverse events**
- **Patience!!!!!!!!!!!!!!**

# Understanding what our data was telling us



- 133♀ & 111♂
- Average age = 74.5
- 110 (45%) falls were related to toileting
- 83% of fallers were not outliers
- 46% had “impaired mental status”
- 163 (67%) had been prescribed and administered CNS meds in the 24 hrs prior to falling (range 0-7)
- 62% of falls were not on Aged Care wards

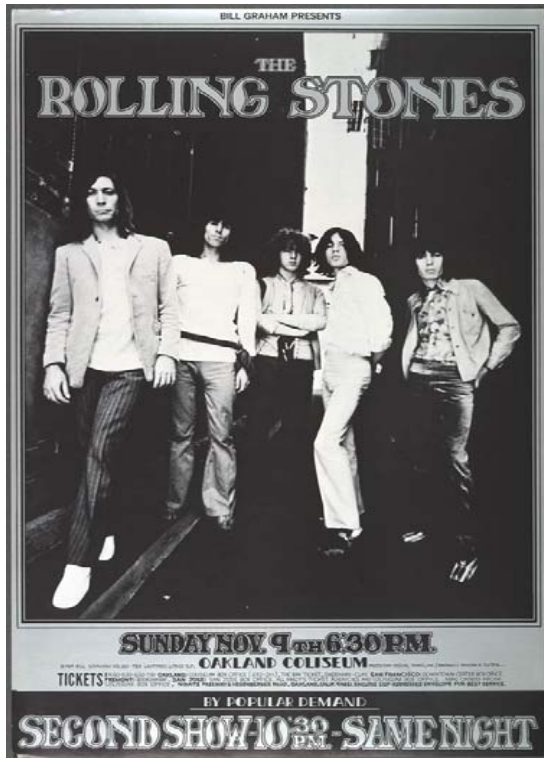
# What we now do

- **Share data across all medical and surgical wards**
- **Meet monthly to discuss falls across hospital**
- **Identify trends at hospital level**
- **Education, education, education**
- **Discuss challenges - staffing**
- **Pilot new ideas – alarm devices, hip protectors**
- **Learn from serious events**

# Other Strategies

- Alarm devices
- Mobility status above beds
- Linking falls and delirium management
- Reviewing use of AINS (assistants in nursing)
- ReViVe volunteers
- Falls Bay
- *Reviewing use of side rails*
- *Introduction of screening – modified STRATIFY*

# Medications



**“we rarely use night sedation and I know there has been the odd fall on the ward but very few”**

**Target Areas**

**Sedative Hypnotics**

**Vit D**

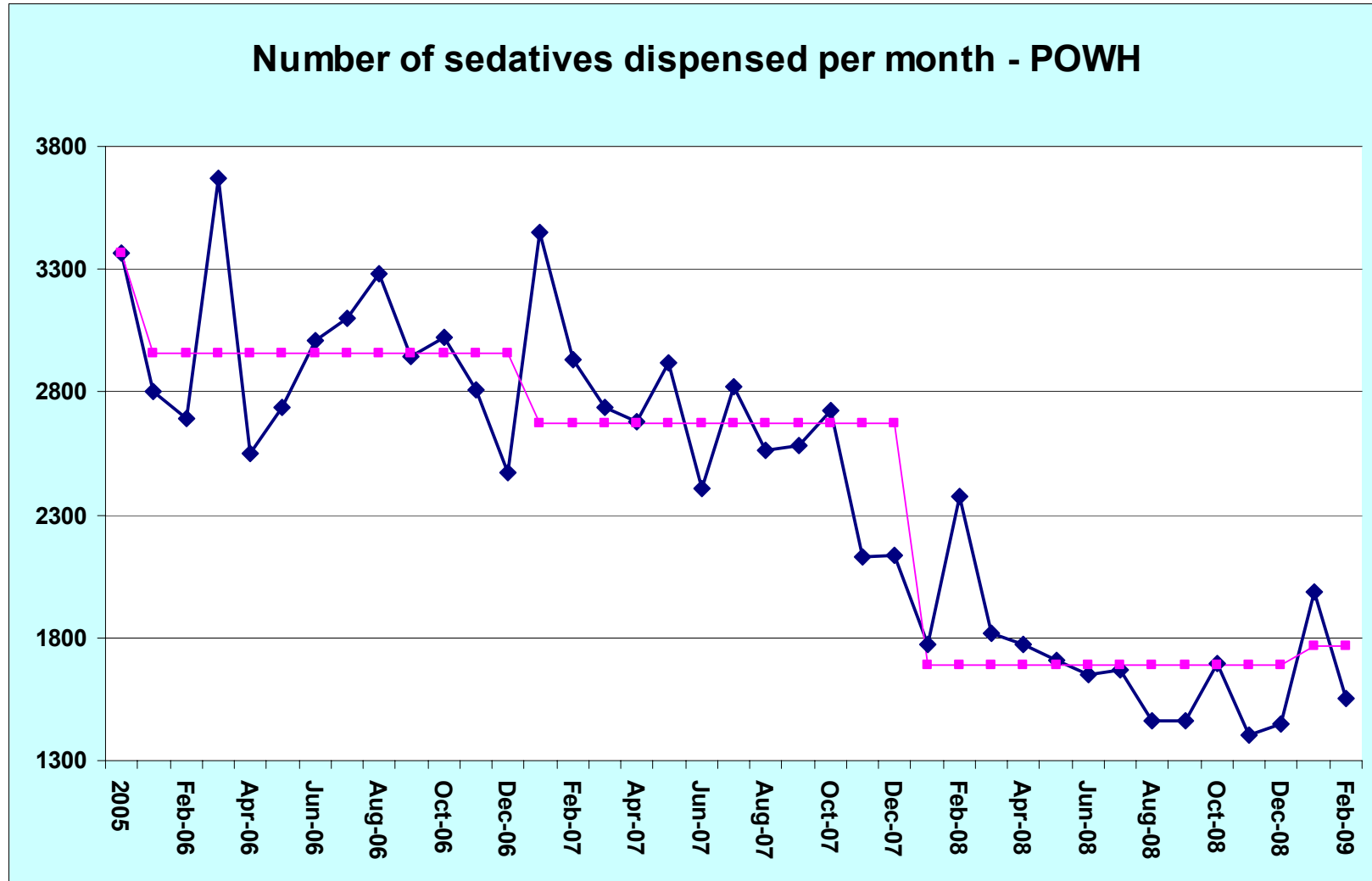
**Now**

**Antipsychotics**

**Future**

**?**

# Hypnotic use - POWH

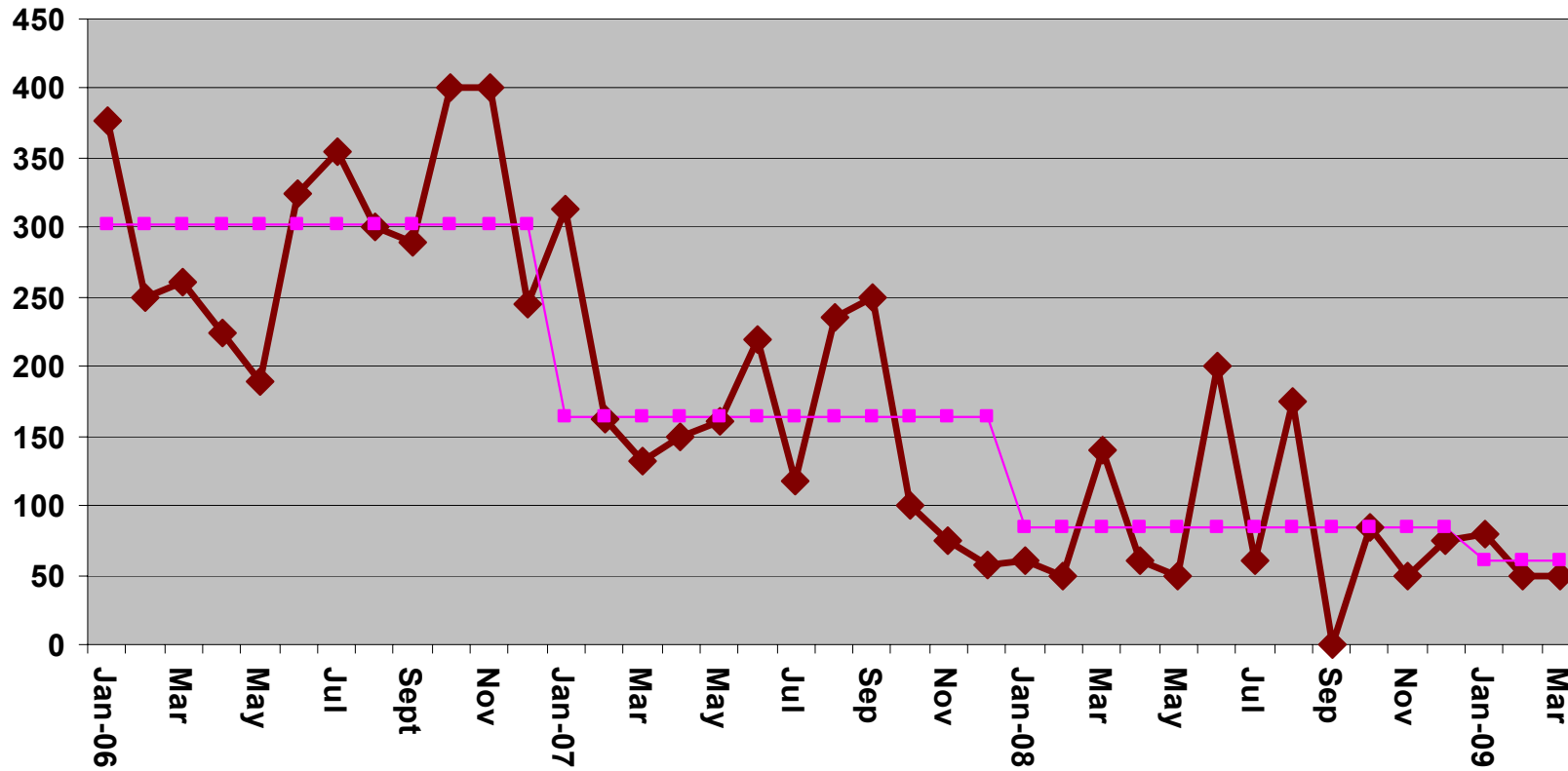


2009 Goal = 1200 sedatives per month

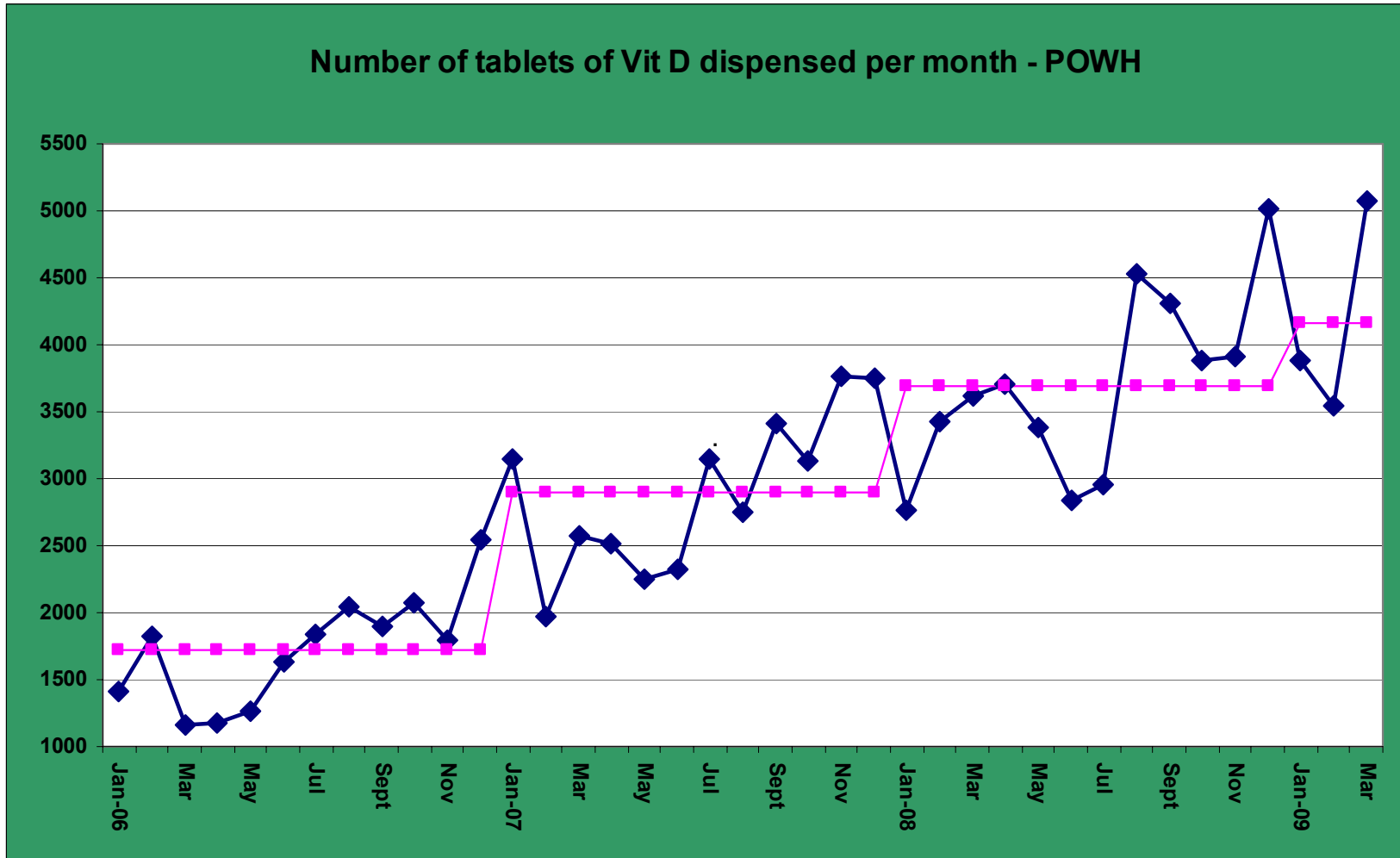
$r = -0.812, p < 0.001$

# Hypnotic Use

Cardiothoracic Surg -D3S, Hypnotic tablets dispensed per month



# Use of Vitamin D

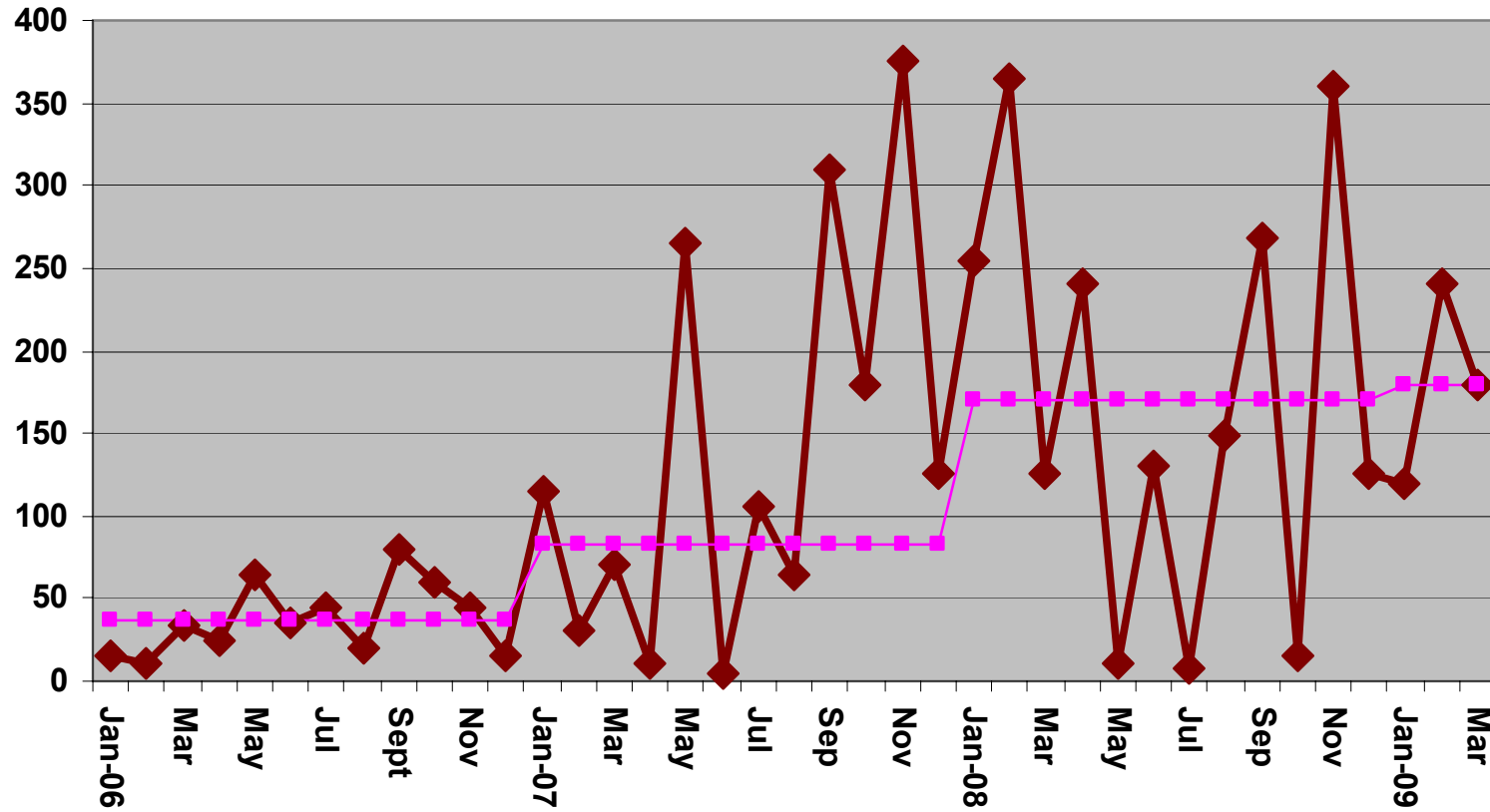


2009 Goal = >4000 vit D tablets per month

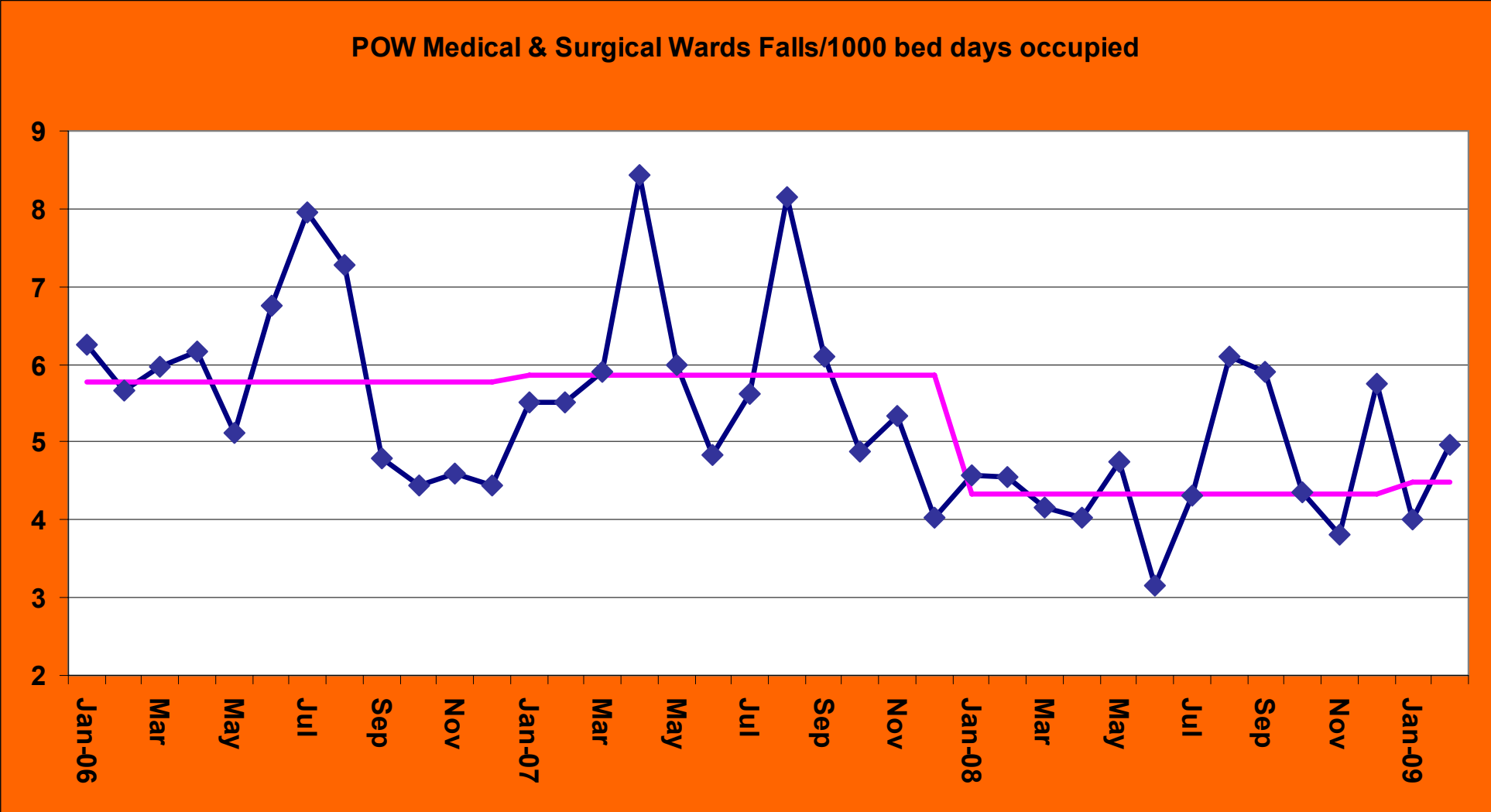
$r = 0.878, p < 0.001$

# Vit D Use

DB2N - Vit D tablets dispensed per month

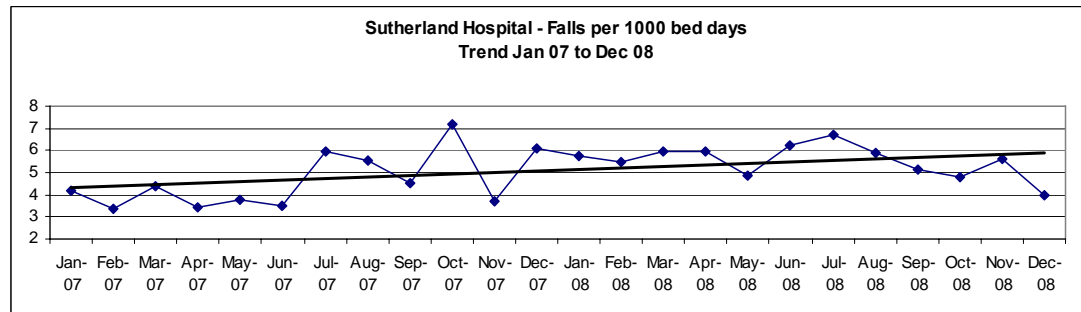
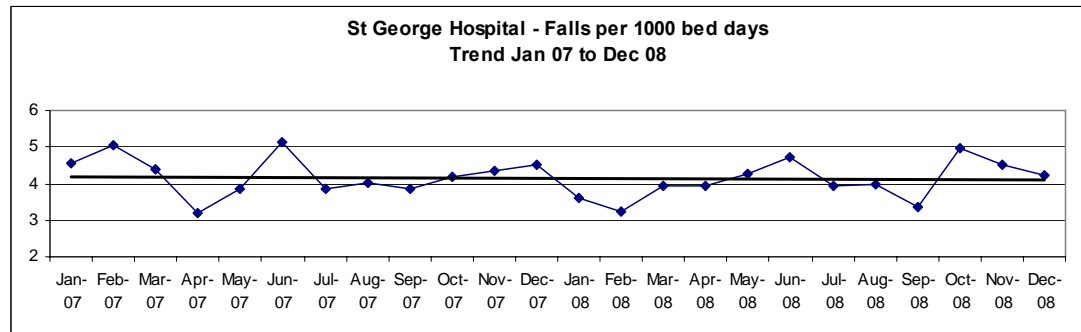
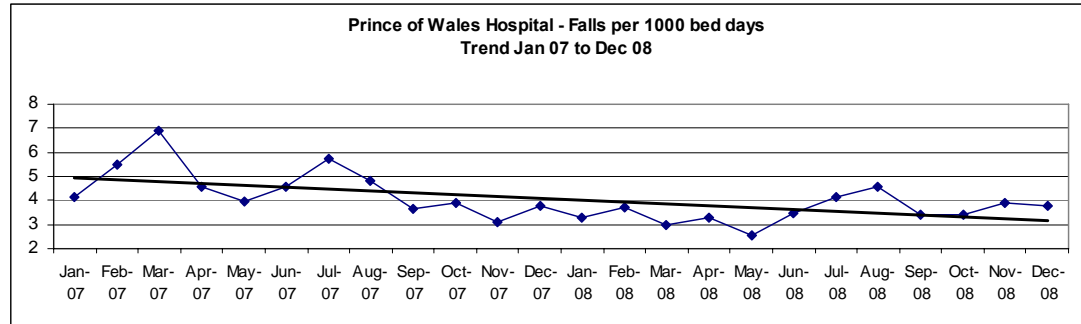


# Falls / 1000 bed days occupied - POWH

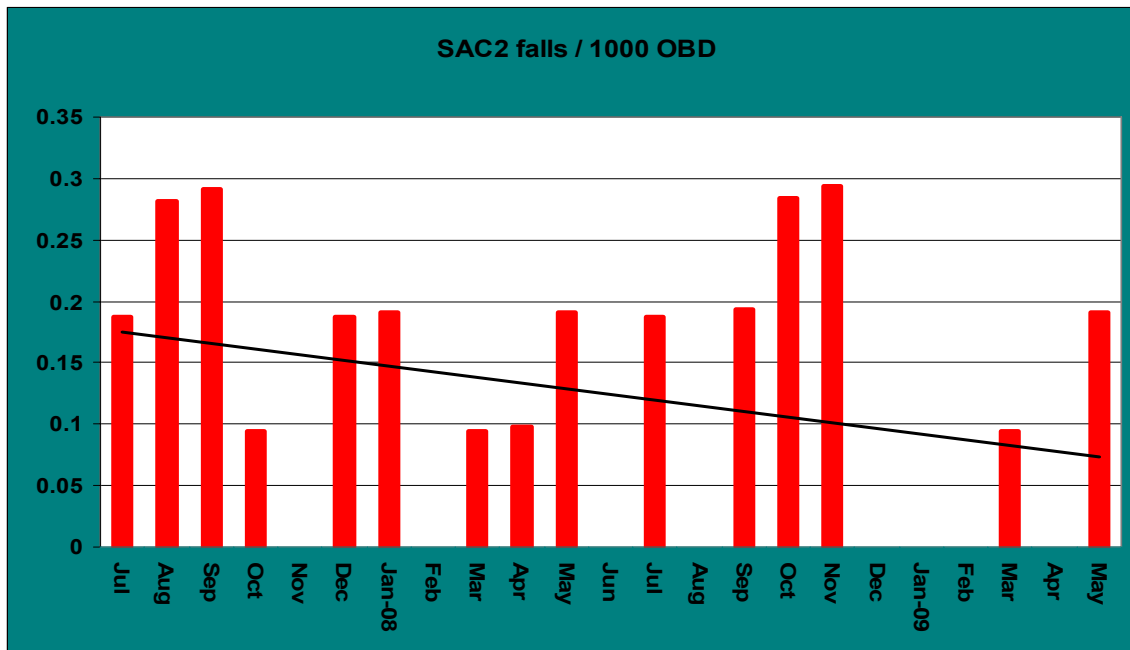


$r = -0.431, p = 0.014$

# Benchmarking Locally



# SAC 2 Falls



All SAC 2s reviewed by committee  
15 SAC 2s in 2008  
12 not in Aged Care  
6 females  
11/15 were in confused and predominantly older people

# Focus for 2009 – onwards

## Management of the Confused Older Person

- **Delirium policy and guidelines**
- **Antipsychotic Use**
- **AIN Use**
- **Restraint Use**
- **Side Rail Use**
- **Availability of Alarm Devices**

# Conclusions

- **Most falls in acute hospitals do not occur in Aged Care wards**
- **Strategies to prevent falls need to be hospital wide**
- **Access to regular, reliable data is essential**
- **Prescribing data has been influential**
- **Sustainable change needs to come from within clinical teams**
- **Changing attitudes, cultures and behaviour takes time**