

1. Epworth HealthCare
2. Monash University
3. Deakin University
4. Swinburne University of Technology



Epworth
Research

Introduction

Inpatient Falls

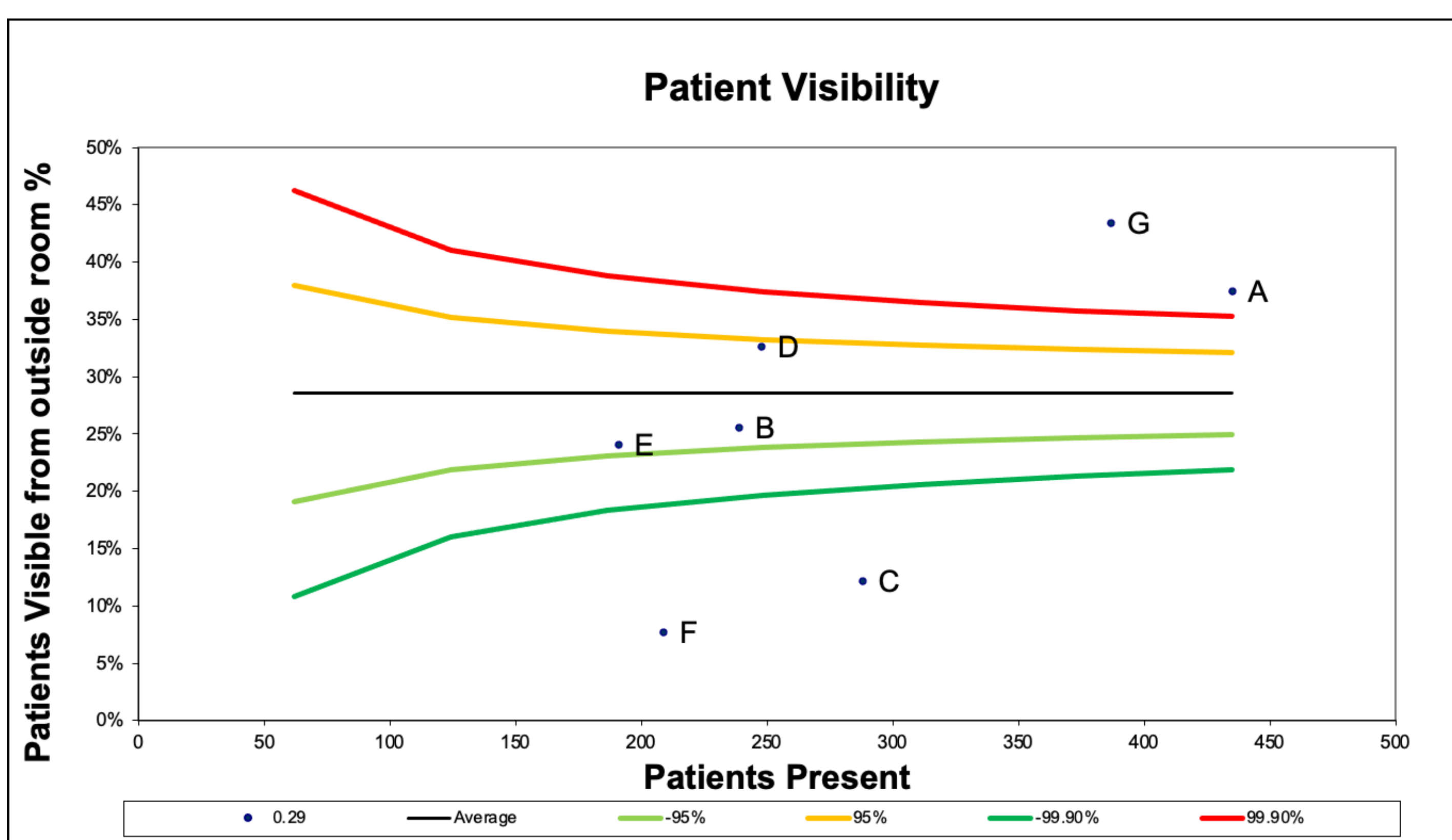
Falls substantially impact the health and recovery of hospital inpatients, costing Australia over an estimated \$AUD 1 billion annually¹⁻². Epworth is involved in a NHMRC-funded research project³ by Monash Partners to investigate effectiveness of falls prevention strategies, including mobilisation alarms

Aims

- To use ‘**funnel plots**’ to compare falls prevention strategy usage at 7 anonymous **Epworth wards**, across 10 days in January 2023

Results and Discussion

Funnel Plots



Hospital wards A & G are **above** the upper 99.7% control limit for patient visibility, wards C & F are **below** the lower 99.7% limit

No hospital wards are **above** or **below** the 99.7% limits for mobilisation alarm use

Hospital ward F is **above** the upper 99.7% control limit for non-slip sock usage, ward G is **below** the lower 99.7% limit

Conclusions

Funnel plots clearly show which wards need to be followed up, particularly those above and below the 99.7% limits. The next step would be to **investigate possible reasons** including differences in case mix

Software used: QI Macros for Excel 2023

References: ¹Mitchell D et al (2018). *International Journal of Nursing Studies*, 86, 52-59. ²Brusco N et al (2021). *International Journal of Nursing Studies*, 117, 1-9. ³Haines T et al (2021). *PLoS ONE*, 16, 1-17. ⁴<https://fingertips.phe.org.uk/profile/guidance/supporting-information/PH-methods> ⁵https://www.perceptualedge.com/articles/visual_business_intelligence/variation_and_its_discontents.pdf. ⁶Coory M et al (2007). *International Journal for Quality in Health Care*, 20, 31-39. ⁷Spiegelhalter D (2002). *Qual Saf Health Care*, 11, 390-392. ⁸Cameron P (2020). *Elsevier*, 50, 114-121.

Methodology

Analyses Conducted

- **Funnel plots**^{4-5,6-7} compare each hospital ward’s falls prevention strategy usage to overall means of the wards, using 95% (two standard deviations above the mean) and 99.7% (three standard deviations above the mean) ‘**control limits**’
- **Funnel plots** have recently been used in Australia⁸ to identify injury trends in patients admitted to major trauma services, helping reduce the burden of injury

