

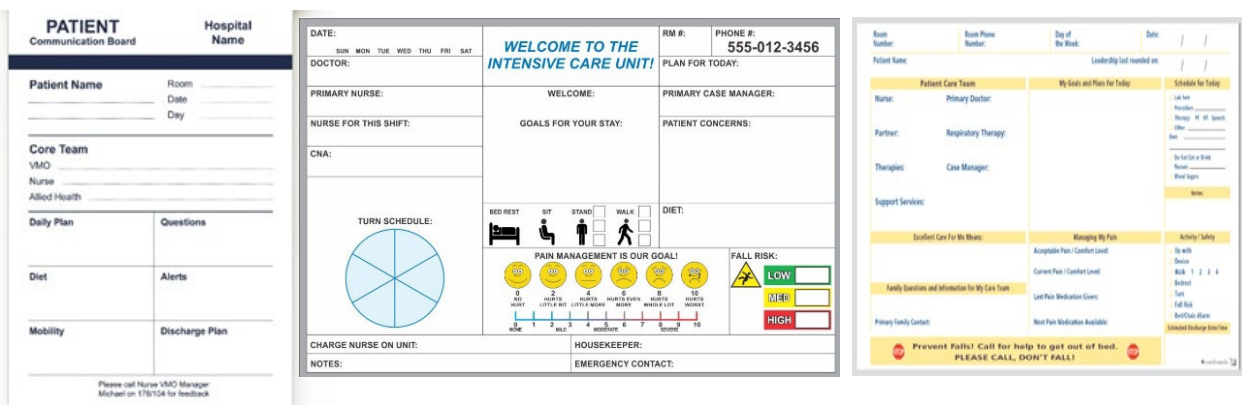
Enhancing communication in the intensive care unit: Exploring the use of bedside information boards for patient and family engagement (ISEEU)

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Background:

Patient centred care is delivery of healthcare that considers individual diversity and goals, patient and family satisfaction, and improves health outcomes.¹ Dimensions of patient centred care include provision of information and open communication, continuity and coordination of care, and the involvement of family and carers.² A strategy to improve communication processes recommended by the Australian Commission on Safety and Quality in Health is the use of bedside patient/family information.² However, there is sparse evidence on the presence, format, use and efficacy of the bedside patient/family information board in adult Intensive Care Units (ICU). Bedside patient/family information boards used in hospital settings are often rectangular, wall-mounted, and provide a visual reference for information relevant to the patient’s care.³ We have used the term patient/family information board; however, boards have various names including patient care boards and patient whiteboards. Visual examples of patient/family information boards include,



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The bedside patient/family information board provides a medium for transmission of information, recognition of patients’ preferences and values, and a platform for family and carers to ask questions

of the intensive care team.⁶ Research on bedside patient/family information boards conducted in paediatric ICUs, and medical wards indicated use of boards were associated with satisfaction in negotiation of daily processes of care, patient goals, and family engagement.^{7,8} Communication of targeted interventions may improve shared goal setting and boards were considered beneficial in the context of orientation for patients and families, and when clinicians used them daily.⁹ When boards were not regularly updated, patients and families stopped looking at them.¹⁰

We plan to collect data to assess the presence and current use of bedside patient/family information boards. After establishing current practice, we will partner with consumers and stakeholders at a number of institutions to evaluate how boards are used from the perspective of patients, families and clinicians. The following step planned for this program of research is the development of resources to support clinicians to use bedside patient/family information boards as one format to communicate critical information about care. Finally, a pre and post resource implementation study could provide guidance for the presence, format and use of bedside patient/family information boards.

Study question:

Are bedside patient/family information boards present in ICU patient rooms or bed spaces in Australia and New Zealand and what data is recorded on them?

Primary objectives:

To determine the point-prevalence of the presence of bedside patient/family information boards in ICUs binationally.

Secondary objectives:

To describe the characteristics of board location, board design, and content of bedside patient/family information boards.

Long-term outcomes:

Data will inform a long term planned program of research that may;

1. Explore what ICU patients and their family/carers think about bedside patient/family information boards
2. Evaluate how clinicians use the bedside patient/family information boards and what resources they think would support the use of them to achieve their purpose.

3. Develop resources for clinicians of varying levels of experience to use the bedside patient/family information boards to achieve partnership between patients, family/carers and clinicians
4. Evaluate resources developed to support use of patient/family information boards
5. Assess the presence of patient/family information boards and describe the characteristics of board location, board design, and content of bedside patient/family information boards at a subsequent Point Prevalence Program.
6. Consider information required to conduct a health economic analysis on the cost effectiveness of patient/family information boards in ICU.

Methods

Population:

All Australian and New Zealand Clinical Trials Group (CTG) affiliated ICUs were invited to participate in this prospective, cross-sectional, observational audit. A waiver for individual patient consent was obtained from either the National Mutual Acceptance Low or Negligible Risk pathway approved by the lead ethics committee (Sydney Local Health District) (most sites) or from participating site local ethics committees.

The point prevalence program is an appropriate method of collecting data for this project as the topic has not been explored in an Australian and New Zealand adult ICU context. Data collected during the point prevalence program will provide a snapshot of bedside patient/family information board presence and use in ICUs across Australia and New Zealand. The study questions are succinct and can be objectively answered by ICU research coordinators or delegates on the day of the point prevalence program at a single time point.

Hospital-level data were collected from all participating ICUs, including ICU design, presence, size and location of bedside patient/family information boards, and provision of local guidelines used to manage information on the boards. Patient-level data asked if the bedside patient/family information boards were present and what patient information was written on the board.

Inclusion criteria

All patients (aged ≥ 16 years) in participating ICUs one of two designated days in 2024 were included.

Exclusion criteria

None

Statistical analysis

Intensive Care Unit features, patient demographics and patient clinical characteristics describing use of patient/family information boards will be compared using the Chi-square test (categorical variables) and Mann-Whitney U test (continuous variables). Confidence intervals (CIs) set at 95% and p-values of <0.05 will be reported as significant. Explanatory variables that are statistically significant in univariate logistic regression will be considered for inclusion in multivariable logistic regression¹¹.

Planned figures and tables

Table 1 Patient Characteristics

Characteristic	N = XX	%
Sex, (male)	Xx/xx	Xx%
Age (years), median [IQR]	Xx [x, x]	
APACHE II score, median [IQR]	Xx [x, x]	
ICU Admission diagnosis		
Non-operative	Xx/xx	Xx%
Operative	Xx/xx	Xx%
ICU Length of stay (censored at Day 28 after PPP* day)	Xx [x, x]	
ICU length of stay on PPP day	Xx [x, x]	
Mechanical ventilation on the study day	Xx/xx	Xx%

*PPP - point prevalence program

Table 2 Unit level bedside patient/family information board

	N= XX	%
ICU CICM Level		
Level 1	Xx/ xx	Xx%
Level 2	Xx/ xx	Xx%
Level 3	Xx/ xx	Xx%
ICU Geographical Area		
Metropolitan	Xx/ xx	Xx%
Rural	Xx/ xx	Xx%
Remote	Xx/ xx	Xx%
Hospital System		
Public	Xx/ xx	Xx%
Private	Xx/ xx	Xx%
Combined public and private	Xx/ xx	Xx%
Bedside patient/family information boards present		
At every bed area	Xx/ xx	Xx%
At some bed areas	Xx/ xx	Xx%
Not present	Xx / xx	Xx%
Type of bedside patient/family information boards		
Digital	Xx / xx	Xx%
Hard Surface (Whiteboard, Resin, Laminate, Glass)	Xx / xx	Xx%

Cardboard	Xx / xx	Xx%
Other	Xx / xx	Xx%
Guideline for use of bedside patient/family information boards		
Policy	Xx / xx	Xx%
Protocol	Xx / xx	Xx%
Guideline	Xx / xx	Xx%
Other	Xx / xx	Xx%
None	Xx / xx	Xx%
Pre-printed headings on bedside patient/family information boards		
Patient name / preferred name	Xx / xx	Xx%
Nurse's name	Xx / xx	Xx%
Doctor's name	Xx / xx	Xx%
Name of other team members	Xx / xx	Xx%
Today's date or day of the week	Xx / xx	Xx%
Date board updated	Xx / xx	Xx%
Plan for ward transfer or discharge date	Xx / xx	Xx%
Goal for today	Xx / xx	Xx%
Patient questions for the team	Xx / xx	Xx%
Family questions for the team	Xx / xx	Xx%
Important information about me	Xx / xx	Xx%
Patient and carer escalation of care information	Xx / xx	Xx%
My preferred language is...	Xx / xx	Xx%
My communication mode is...	Xx / xx	Xx%
My mobility status	Xx / xx	Xx%
Other		
There are no section headings	Xx / xx	Xx%

Table 3 Patient level bedside patient/family information board

	N = xx	%
Bedside patient/family information board present in patient room		
Yes	Xx / xx	Xx%
No	Xx / xx	Xx%
Is there information written on the board related to the patient?		
Yes	Xx / xx	
No	Xx / xx	
Data entered on bedside patient/family information boards		
Patient name / preferred name	Xx / xx	Xx%
Nurse's name	Xx / xx	Xx%
Doctor's name	Xx / xx	Xx%
Name of other team members	Xx / xx	Xx%
Today's date or day of the week	Xx / xx	Xx%
Date board updated	Xx / xx	Xx%
Plan for ward transfer or discharge date	Xx / xx	Xx%
Goal for today	Xx / xx	Xx%
Patient questions for the team	Xx / xx	Xx%
Family questions for the team	Xx / xx	Xx%
Important information about me	Xx / xx	Xx%
My preferred language is...	Xx / xx	Xx%

My communication mode is...	Xx / xx	Xx%
My mobility status	Xx / xx	Xx%
Other	Xx / xx	Xx%
There is nothing written on the board	Xx / xx	Xx%

Data availability statement:

Requests for data should be made to the Corresponding Author. Data are available based on the data sharing policy of The George Institute for Global Health.

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