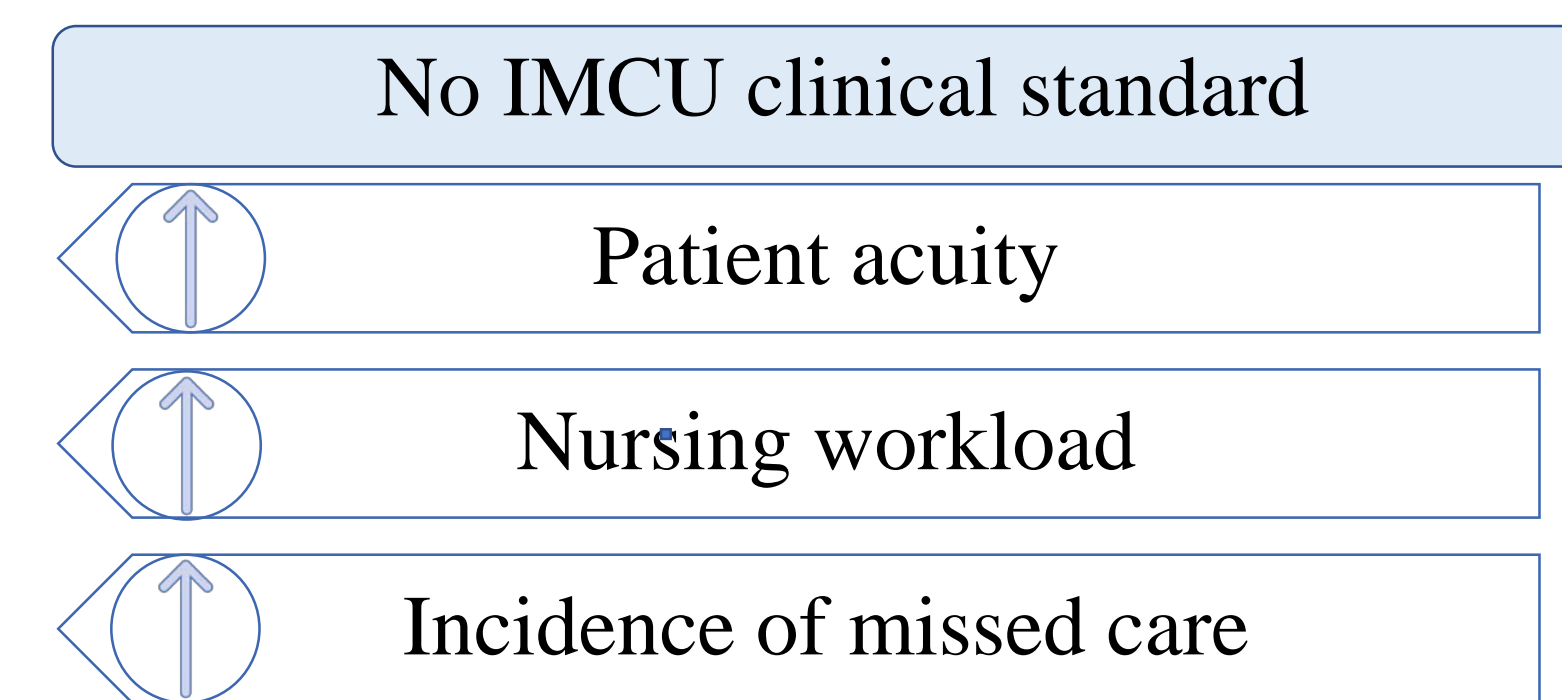# Patient Acuity, Nursing Workload, & Missed Care in the Intermediate Care Unit
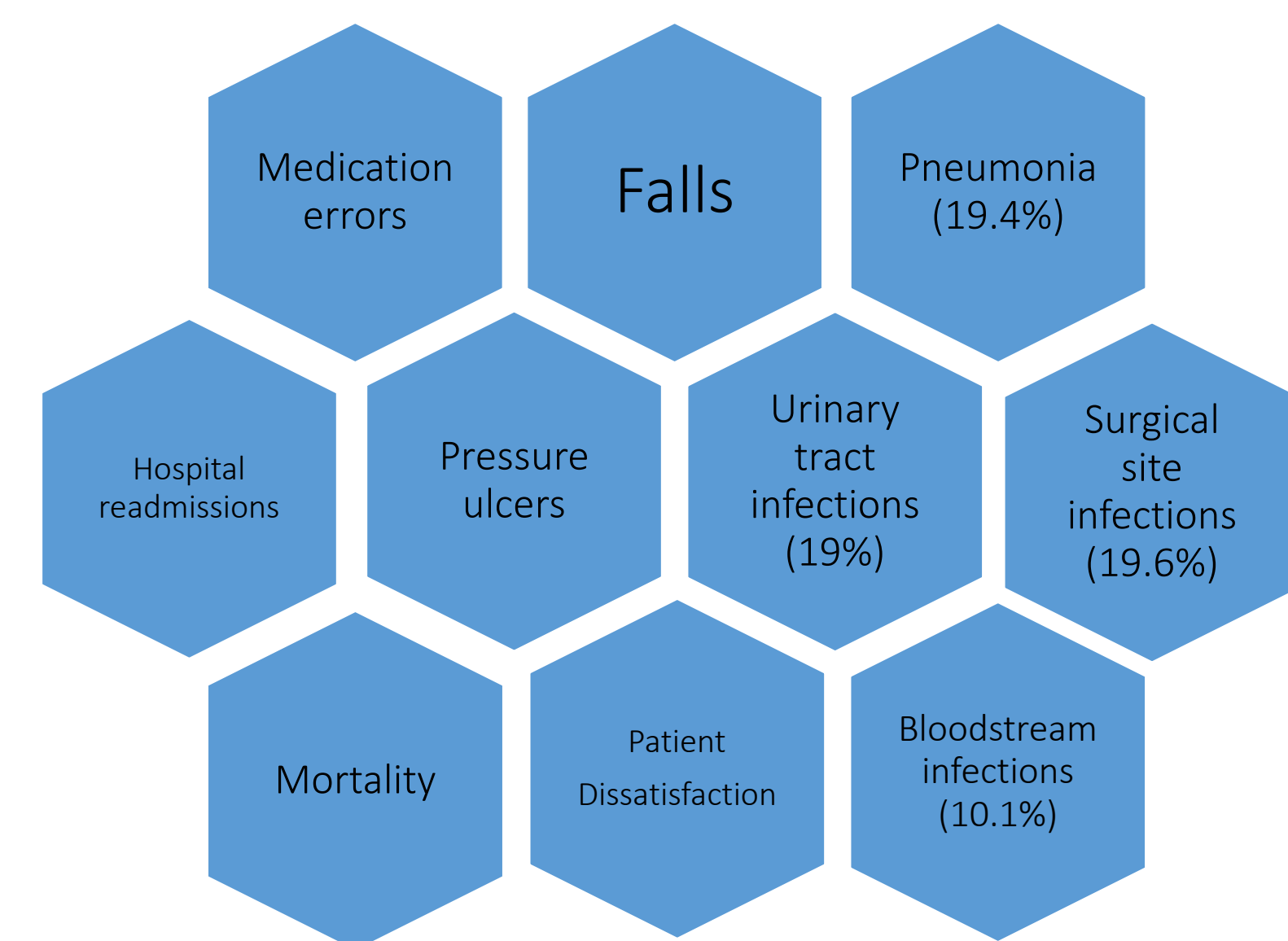
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## Introduction & Background

No IMCU clinical standard

Patient acuity

Nursing workload

Incidence of missed care

- 15% of patients admitted to IMCU require ICU transfer later [1]
- Missed care = delayed, partially completed, not completed care [2]
- 55-98% of nurses reported ≥ missed care at shift [3]
- Patient complications [4][5][6][7]



Medication errors | Falls | Pneumonia (19.4%)
Hospital readmissions | Pressure ulcers | Urinary tract infections (19%) | Surgical site infections (19.6%)
Mortality | Patient Dissatisfaction | Bloodstream infections (10.1%)

## Purpose & Aims

The purpose of this project is to understand how best to support the nursing staff of this IMCU. A needs-based assessment will be performed to accomplish the following:

1) Explore the relationship between patient acuity, nursing workload, and missed care events
2) Identify interventions to reduce nursing workload
3) Identify interventions to reduce missed care events

## Methods

**Design:** Retrospective data and survey questionnaires over 12-weeks
**Setting:** IMCU at a large academic medical center in urban city of Maryland
**Sample**
a) Adults admitted to IMCU 7/2012-12/2012
b) Adults who worked with IMCU patients 9/2021-12/2021
**Procedures**
- Presented PowerPoint for nursing staff to introduce project and roles
- Conducted focus group to explore missed care events
- Used descriptive statistics for data analysis

| Measured Variable | Tool |
|---|---|
| Patient acuity | APACHE II |
| Nursing workload | NASA TLX |
| Missed care events | MISSCARE |

## Results

**Table 1**
*Mean Perceived Nursing Workload & Nursing Experience Level*

| | How mentally demanding was the shift? (SD) | How physically demanding was the shift? (SD) | How hurried or rushed was the shift? (SD) | How successful were you in accomplishing your nursing tasks for your shift? (SD) | How hard did you have to work to accomplish your level of performance? (SD) | How insecure, discouraged, irritated, stressed, and annoyed were you? (SD) |
|---|---|---|---|---|---|---|
| <1 year (n=2) | 17.00 (0) | 16.00 (1.41) | 18.00 (1.41) | 13.00 (2.83) | 18.50 (3.54) | 19.00 (2.83) |
| 3-5 years (n=2) | 12.50 (3.54) | 10.00 (0) | 13.50 (3.54) | 16.00 (5.66) | 16.50 (4.95) | 14.50 (6.36) |
| 5-7 years (n=1) | 11.00 | 13.00 | 15.00 | 17.00 | 13.00 | 4.00 |
| >7 years (n=2) | 14.50 (4.95) | 16.50 (2.12) | 16.50 (0.71) | 16.50 (2.12) | 16.0 (1.41) | 10.50 (2.12) |
| Total (n=7) | 14.14 (3.39) | 14.00 (3.16) | 15.86 (2.48) | 15.43 (3.21) | 16.43 (3.15) | 13.14 (6.09) |

Color key: white= mild intensity (0-7), blue= moderate intensity (7-14), dark blue= high intensity (15-21)

- NGN rated highest for mental demand, feeling hurried, effort to accomplish performance, and negative feelings
- NGN rated lowest feelings of success in accomplishing nursing tasks
- Nurses >3 years experience rated highly in ability to accomplish nursing tasks

- All nurses reported labor issues for missed care regardless of experience
- Inadequate staffing was the top reported reason for missed care
- NGN cited 2x as many communication issues for missed care than nurses with 3-7 years experience
- Nurses <7 years experience reported higher frequencies of poor backup from team, inadequate assistive personnel, and unexpected rise in patient volume or acuity

**Table 2**
*Reported Reasons for Missed Care Events & Level of Experience of the Nurse Who Reported*

| Reported Reasons for Missed Care Events | <1 Year Nursing Experience | 3-7 Years Nursing Experience | >7 Years Nursing Experience | Count (%) |
|---|---|---|---|---|
| Communication | | | | |
| Nurses who reported (n=2) | 1 | 1 | 0 | 2 (29) |
| Tension/communication breakdowns within nursing team | 0 | 0 | 0 | 0 |
| Lack of backup support from team members | 1 | 1 | 0 | 2 (29) |
| Nursing assistant did not communicate that are was not done | 1 | 0 | 0 | 1 (14) |
| Caregiver is off unit of unavailable | 0 | 0 | 0 | 0 |
| Tension/communication breakdowns with the medical staff | 0 | 1 | 0 | 1 (14) |
| Tension/communication breakdowns with other support departments | 1 | 0 | 0 | 1 (14) |
| Other departments did not provide the care needed | 1 | 0 | 0 | 1 (14) |
| Inadequate hand-off from previous shift or sending unit | 0 | 0 | 0 | 0 |
| Unbalanced patient assignments | 1 | 0 | 0 | 1 (14) |
| Material Resources | | | | |
| Nurses who reported (n=1) | 1 | 0 | 0 | 1 (14) |
| Supplies/equipment not available when needed | 1 | 0 | 0 | 1 (50) |
| Supplies/equipment not functioning properly when needed | 0 | 0 | 0 | 0 |
| Medications not available when needed | 1 | 0 | 0 | 1(50) |
| Labor Resources | | | | |
| Nurses who reported (n=6) | 2 | 2 | 2 | 6 (85) |
| Unexpected rise in patient volume and/or acuity on the unit | 1 | 1 | 0 | 2 (22) |
| Urgent patient situations (e.g, patient condition worsening) | 0 | 0 | 0 | 0 |
| Inadequate number of staff | 1 | 1 | 2 | 4 (44) |
| Inadequate number of assistive personnel (i.e, nursing assistants, technicians, etc.) | 2 | 0 | 1 | 3 (33) |

## Results (cont.)

**Table 3**
*Focus Group Responses on Missed Care Events*

| What are your thoughts on missed care events on this unit? |
|---|
| • We need to "let someone know **they are not alone**, [give them] **someone to talk to**" |
| • "Strongly encourage **lunch breaks** for [the full] hour [and have] **buddy nurses** to cover each other" |
| • "[Have] **charge and a mentor** to help cover" |
| • "[We] hired a lot of **new grads**, bench strength is gone" |
| • **Poor team relationships** with ICU team, "did not **close the loop** about [transfer] management" |
| • "**Communication** between the **resident and the nurses** are not there [because of] **no trust or experience**" |
| • "Consult doesn't get [communicated] down, [they] get curbided…" |
| • "Interns always say no [to nursing consults], [they need] **more support and appropriate resources** in an acute situation" |
| • Who can residents reach out to when they are feeling overwhelmed? This must be addressed to improve **teamwork**. |
| • "[Lack of] **nursing autonomy** and empowerment for **new grads**" |
| • "[We] need to **empower new grads** to feel comfortable with themselves and **encourage them to ask for help or commnicate**" |
| • Collaboation is difficult without knowing the resources or answers |

- Themes: communication, new graduates, teamwork, support, resources
- Miscommunication and lack of nursing experience contributed to missed care
- Strategies: take breaks, buddy systems, ask for help, mentorship opportunities

## Conclusion

- There is a positive association between nursing workload, and frequency of missed care events
- NGN experienced highest workload burden and were the most likely to miss care related to communication issues
- Focus group suggests interventions that support NGN to ↓ nursing workload and ↓ missed care events
- Interventions: preceptorships, nursing resources, cultivating strong teamwork, and adequate staffing

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