The Feasibility of an Occupational Therapy Led Environmental Checklist for Delirium: A mixed methods study

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BACKGROUND

Delirium affects 10-18% of older Australians during hospital admissions, costing the health system approximately $8.8 billion annually[1]. Previous research indicates multicomponent interventions reduce delirium risk by 53%, are relatively low cost and shorten hospital stays[2]. However, the expertise of occupational therapists around environmental modification remains underutilised in this area of practice.

The Occupational Therapy team at Western Health developed a 20-item checklist to optimise hospital environments, targeting a wide range of delirium risk factors (e.g. hydration, clutter, sensory needs). This study sought to understand whether an occupational therapy led hospital environmental checklist was feasible for patients with or at risk of delirium in acute and sub-acute settings.

AIMS

- Describe service (e.g., length of stay, adverse events) and functional outcomes (Barthel Index, Functional Independence Measure) for patients receiving the environmental checklist versus those who did not.
- Explore MDT perspectives on feasibility, barriers, and facilitators of integrating the checklist into standard care.

Occupational Therapy Delirium Environment – Patient Hospital Room Checklist														
√ if already completed X if absent * intervention **Date:**														
Orientation:														
• Clock correct time / date														
• White board is updated (day, date, month, year)														
• Blinds up/down (use of natural light lamp if appropriate)														
• Lights on if dark														
• Toilet is labelled														
• Patient is orientated														
Items to have within reach:														
• Glasses, hearing aids and mobility aid														
• Water available and cup														
• Stable table in place for low low beds														
• Phone and call bell														
Personal items:														
• Own day clothes and night clothes to wear														
• Personal photos, blankets, other items														
Daily Routine:														
• OT AHA referral made to complete checklist														
• Family / friends / carers encouraged to visit / educated														
• Engagement activities provided (as referred by OT)														
• Patient encouraged to SOOB for meals														

Fig 1: Portion of Environmental Checklist

METHOD

Design: Mixed-methods convergent parallel design, guided by the Pan Occupational Paradigm[3]. Rigour was supported by power analysis, the use of validated tools, targeted inclusion criteria, and a detailed audit trail.

Data Collection:

- **Electronic Medical Record (eMR) Audit**: Pre/post-implementation (n=30, 15 pre/15 post) for older adults at risk of or with delirium in acute/sub-acute wards. Outcomes included length of stay, adverse events, Barthel Index (BI) and Functional Independence Measure (FIM) scores.
- **Multidisciplinary Team (MDT) Surveys**: Pre (n=21), post (n=17) implementation, using measures of acceptability, appropriateness, and feasibility.
- **Qualitative**: Post-implementation focus groups/interviews (n=13) with MDT members via Microsoft Teams.

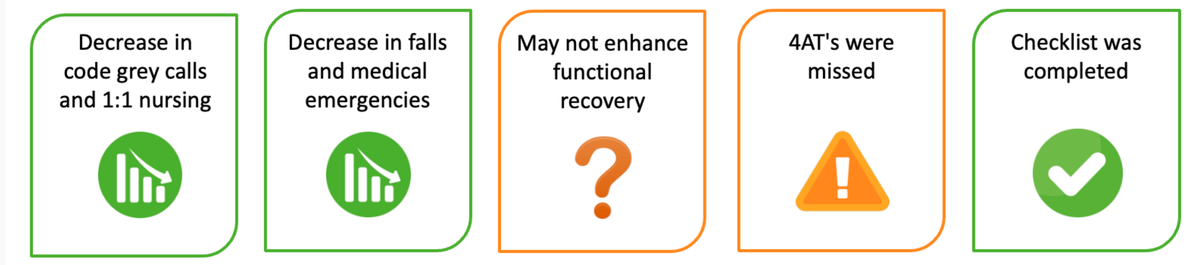
Analysis: Descriptive statistics and Minimal Clinically Important Difference for quantitative data. Thematic analysis for qualitative data, with triangulation to support confirmability.

KEY FINDINGS

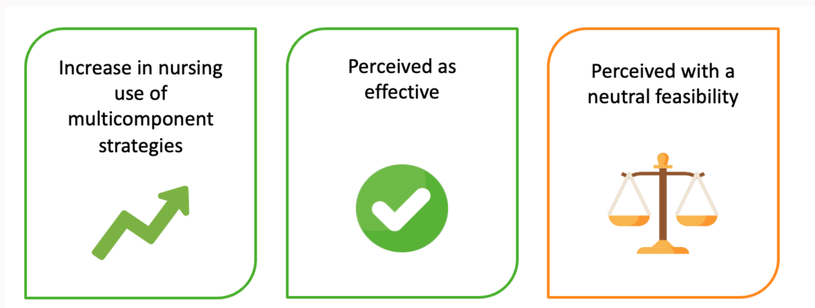
Focus Group:

- **Facilitators:** Staff preparation, checklist integration with eMR, reduced inappropriate bed rail use.
- **Barriers:** Time constraints, resources shortages (e.g., stable tables, clothing), confusion over delirium management responsibility.

eMR Audit:



Survey



DISCUSSION

- The Environmental Checklist reduced adverse events, but several barriers (workloads, resources, family engagement) limited its feasibility.
- Removing environmental modifications (e.g., water due to spillage concerns) can worsen delirium
- Integrating the Checklist into the eMR, improved completion of 4AT assessments, and delirium champions may enhance sustainability.

Limitations: Single hospital study, small sample size, inconsistent eMR documentation, and unspecified ward differences in MDT surveys.

IMPLICATIONS FOR PRACTICE

Example Practical Solutions:

- Replace curtains with mesh tops for natural light and privacy.
- Create a “shop” for free patient clothing access.
- Use spill-free cups to ensure hydration without spillage risk.
- Increase stable table availability for floor level beds.

Education Required: Integrate delirium management into undergraduate healthcare curricula and provide OT-led training on the role of the environment in risks to patients and staff.

Sustainability Actions: Develop an implementation manual and assign delirium champions to support ongoing practice.

CONCLUSION

The occupational therapy led Environmental Checklist shows promise in reducing adverse events for delirium patients, and the MDT supported its implementation into practice. Addressing barriers like resource shortages and enhancing education could improve its feasibility. Further research is needed to evaluate cost-effectiveness and trial checklist in diverse Australian settings with patient/carer perspectives

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