Delirium Evaluation in the Timely delivery of Emergency Care Trial (DETECT)

Pilot Project Summary Report

In 2024, Safer Care Victoria (SCV) partnered with 14 Victorian health services to explore ways to improve delirium screening of older people in emergency care settings.

BACKGROUND

Delirium is a serious condition associated with increased mortality and length of hospital stay. Older age is a key risk factor, and early screening and recognition of delirium risk are important to improve outcomes for patients[1].

Delirium often goes undetected in Victorian emergency departments (EDs) and urgent care centres (UCCs) due to multiple environmental and clinical demands on staff. There is a lack of consensus on best practice and significant variability in the screening and monitoring of delirium in these settings.

Improving the administration of a validated screening tool for delirium in ED and UCCs allows services to better understand the proportion of older people impacted by, or at risk for, delirium at arrival to the hospital. In doing so, appropriate care pathways can be activated to improve outcomes for patients.

AIM

The Delirium Evaluation in the Timely delivery of Emergency Care Trial (DETECT) pilot project aimed to better our understanding of the proportion of older people*, who are impacted by delirium in emergency care.

We strived to do this by improving the administration of a delirium screening tool in emergency care settings, with health services setting their own goal of how much to improve by the end of the testing phase (September 2024).

*≥65 years and older, with ≥45 years and older for First Nations people

RESULTS AT A GLANCE

Health services

14 Victorian health services encompassing 22 emergency care sites (both EDs and rural UCCs) participated through the implementation period.

Impact and duration

26,373 older Victorians were audited for delirium screening processes at participating sites, during the testing period May to September 2024.

Results

- Explorative baseline data collection showed before the testing phase, an aggregated average of 8% (<1 in 10) of older people were screened for delirium in participating sites using a completed tool, and 17.6% of these screened positive for suspected delirium.
- At the end of the testing period, screening increased on average to 33% (1 in 3) screened and 18% of these screened positive for suspected delirium on the completed tool.
- A significant increase in the diagnosis of delirium coded in EDs during the pilot period.
- Improving staff education about delirium in emergency care and embedding a simple and effective process were enablers for success.

[1] Australian Commission on Safety and Quality in Health Care. Delirium Clinical Care Standard; 2021

IMPROVEMENT APPROACH

SCV shared a pilot guide resource, provided 3 online learning sessions, and facilitated monthly action learning communities for participating health services, providing improvement coaching and opportunities for shared learning. Group meetings, emails and 1:1 discussion encouraged collaboration among health services and with SCV.

RESULTS

By the end of the 5-month DETECT implementation period, a sample size of 26,373 people aged 65 years or over were audited for delirium screening and results in EDs and UCCs across metro, regional and rural Victoria. The aggregated proportional data reported from participating teams are shown below.

Improved rates of delirium screening

All sites that tested a validated cognitive screening tool for delirium used the 4AT. The average proportion of screening rates using this completed tool increased from 8% at baseline (<1 in 10 people), to 32.6% (1 in 3 people) by the end of the testing period, meaning more older people had the opportunity for delirium to be recognised earlier. In comparing different service types:

- EDs demonstrated aggregated improvement in screening rates using the 4AT to 43% for eligible patients during the test period, up from 13% at baseline.
- UCCs demonstrated aggregated improvement in screening rates using the 4AT to 28% for eligible patients, up from 3% at baseline.

The primary reason for variation across service types was due to differences in system processes and idea selection when comparing UCC and ED settings. While EDs tested the completed 4AT as the primary process change, the majority of UCCs chose to embed the Single Question identifying Delirium (SQiD) into risk screening forms. This demonstrated an aggregated 41% process improvement in asking the SQiD (baseline 0%), to trigger escalation. Further measurement is required to accurately assess the conversion rate of positive scores to completed assessment (i.e. the 4AT).

Improved detection of consumers with delirium

- Notably, an increasing proportion (37%) of older people identified (coded) with an emergency diagnosis of delirium was evident in hospital administrative data (Victorian Emergency Minimum Dataset). This aligned with the implementation period for DETECT and reflects the positive impact of the project on staff awareness, screening and documentation for delirium in emergency care. This likewise highlights that increased screening can lead to improved detection, meaning less people with delirium being missed.
- The proportion of older people who screened positive for delirium in emergency care on the 4AT remained stable at the end of the testing period at 18.0% (baseline 17.6%). We expected this number to be stable as we were measuring the use of a validated screening tool (the 4AT) for this setting.

Balancing measures

- The average length of stay for older people in emergency care appeared stable. However, due to data lag and short length of the Pilot, this would need to be reviewed over a longer period to best understand any impacts of the project on this indicator.
- Where demographic data was collected, proportional screening rates for populations including culturally and linguistically diverse and First Nations people, were stable compared to baseline population statistics. This reflects that these teams were able to support consumers from priority populations. However, a deeper dive into screening rates for First Nations people aged 45 years and over is recommended to better understand impact in line with agreed risk factors for delirium, and due to anticipated small presenting numbers during the pilot period.

Staff and Consumer experiences

- Three teams that reported staff experience surveys found an improvement in confidence in delirium detection in the older person, and a reduction in finding delirium screening

burdensome, compared to the start of testing. This indicated the success of efforts in staff education and the process for embedding screening into existing workflows.

- Some challenges voiced by staff were about limited time and access to involve family/next-of-kin in the busy emergency environment. This made it difficult to determine if there were any changes to the patient's cognition compared to baseline, which is an important criterion for delirium diagnosis.
- Anecdotal feedback received from patients' support persons were positive regarding provision of information about delirium and the assessment. However, response rate to consumer surveys remained low during the pilot, citing the multi-demands of the emergency environment to obtain this data.

KEY IMPROVEMENTS

There were several changes that led to the biggest improvements in delirium screening rates and identification:

Informed multidisciplinary team

- Staff education and awareness campaigns on delirium and screening practices were rated as the most impactful ideas that improved screening rates. This highlights the importance of building knowledge to drive behaviour change. Ideas included reinforcement of messaging through posters, huddles, video, and education packages.
- Where education processes were measured, improvements in attending to training were reported on average at 60%, with one site reporting as high as 93% staff trained by the end of the pilot.

Simple and effective process

Selecting the most appropriate and efficient tool and timepoint for process change supported increased compliance.

- Utilising the 4AT at first nursing assessment was reported as the most effective tool and timepoint for implementation in most EDs and some UCCs.
- Incorporating the SQiD into triage screening forms was an efficient method to engage the consumer to identify risk and need for escalation in rural UCCs.
- Automation of the 4AT into Electronic Medical Record (EMR) nursing workflow for all consumers with risk factors, was successful for ED sites with the appropriate capability, and led to the biggest trending improvements. This enabled embedding of the task into routine practice.
- Physical markers such as coloured stickers, paper slips or EMR flags to highlight the need for a 4AT for patients that met the age risk criteria for delirium. This idea also had its challenges for paper-based sites due to manual requirement to prepare forms.

LESSONS LEARNED

Key learnings from participating teams:

- All sites reported belief in their ideas and a plan to set new screening compliance targets to improve process consistency. Leveraging the initial pilot learnings to increase the target for screening rates will improve reliability to sustain change and better understand our system.
- Implementing simple processes to identify key risk factors for delirium including older age and cognitive change, should be incorporated into ED and UCC documentation to enable earlier escalation of risk and tailored care.
- Embedding regular delirium education for emergency care staff, such as annual competencies and orientation processes, helps to sustain awareness and account for staff turnover.
- Solutions that incorporate information technology such as EMR increase compliance for task-based processes by reducing cognitive and practical workload.

- Identifying frontline ward leadership, such as a Nurse Unit Manager, and sharing the workload amongst the team were enablers for success.
- Majority of teams found the time commitment to participate in the pilot project challenging in their current organisational context. Sites collecting and submitting manual data found this to be the main activity that proved challenging for teams. Other factors including nursing industrial action, and no funding for supernumerary resource impacted ability to participate in the pilot and delayed implementation. Timing, organisational readiness, and competing priorities are important to establish at the beginning of a project.
- Formal documentation changes can be a time-consuming process. Therefore, leveraging stakeholders with influence such as executive sponsors, can support your goal.

FUTURE RECOMMENDATIONS

Next steps in the delirium pathway from emergency care

Consider the health service's clinical pathway for the patient with delirium to better reflect ED and UCC practice and processes, in conjunction with documented standards of care. Next steps for quality improvement may include:

- Test and adapt delirium screening processes and review associated outcomes for people at greater risk, such as First Nations people 45 years and over. This will help to design a system that meets the needs of our diverse population.
- Review and update hospital delirium guidelines to include better recognition and escalation processes for patients with delirium from the front door to the hospital, not just on the ward.
- Review the strategies to support prevention and harm minimisation for older patients at risk for delirium that can be implemented in emergency care, such as an age-friendly approach.
- Review care coordination pathways for at risk groups to optimise flow and transition of patients with delirium from busy emergency care environments.

Partner with consumers to design, implement and sustain

- Family members or carers are often the best source of information about acute changes in a patient's mental status or behaviour. Work with consumers to ensure their expertise and experiences are considered to understand the local problem when designing and implementing improvement.
- Remain flexible in ways to receive consumer feedback such as via informal feedback, develop or use existing health service surveys, or conduct focus groups.

RESOURCES

Delirium Clinical Care Standard

This standard is made up of quality statements and a set of indicators to improve prevention of delirium in patients at risk, and the early diagnosis and treatment of patients with delirium.

Comprehensive Care Standard

This standard outlines the requirements for your health service to review how you screen and assess patients and ensure care plans reflect their physical, mental and cognitive healthcare needs.

Identifying delirium

Use these tools to improve how you recognise risk and diagnose delirium:

The 4AT Rapid Clinical Test for Delirium

Screening and assessment tools for older people

Creating Age-Friendly Health Systems in Victoria

The '4Ms' Framework (what matters, medication, mind and mobility) provides a 'recipe' and resources for health services to identify, prevent or manage delirium or cognitive impairment in the hospitalised older person.

To receive this publication in an accessible format phone 03 9096 1384, using the National Relay Service 13 36 77 if required, or email Safer Care Victoria <info@safercare.vic.gov.au>

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