RCEM National Quality Improvement Project 2019/2020
Assessing for Cognitive Impairment in Older People
Information Pack

Introduction

Undiagnosed delirium with or without dementia is a contributor to significant morbidity and mortality in Emergency Departments (EDs) and hospitals. This assessment is missed or carried out unreliably in EDs.

Delirium is an acute deterioration in mental functioning arising over hours or days that is triggered mainly by acute medical illness, surgery, trauma, or drugs. It is linked with poor outcomes including medical complications, falls, increased length of hospital stay and mortality (1).

Delirium is among the most common of medical emergencies with a prevalence of 20% in adult acute general medical patients (2). Despite this delirium is underdiagnosed and treatment is variable (3).

The national, multi-disciplinary document "Quality Care for Older People with Urgent and Emergency Care Needs" (the "Silver Book") in the UK, has recommended assessment for delirium and dementia in emergency care and there are quality standards from NICE that follow CG103 (QS63). In SIGN 157, the Scottish Intercollegiate Guidelines Network (SIGN) recommend that the 4AT tool should be used for identifying patients with probable delirium in emergency departments (4). The Society for Academic Emergency Medicine in the USA has recommended delirium screening in the ED as one of the key quality indicators for geriatric emergency care. These all highlight the importance of cognitive assessment in older people.

This is the first time RCEM has run a national Quality Improvement Project (QIP) on this topic, although there has previously been a national clinical audit on this topic.

Objectives

The objectives of the QIP are:

- To identify current performance in EDs against clinical standards and show the results in comparison with performance nationally and in the ED's country in order to facilitate quality improvement.
- To empower and encourage EDs to run quality improvement (QI) initiatives based on the data collected and assess the impact of the QI initiative on their weekly performance data.

Methodology

Inclusion criteria

Patients must meet the following criteria for inclusion:

- Patients **aged 65 years and older**
- Presenting to a type 1 ED
- **NEWS2 score of 4 or under** (or your department's equivalent for a low or low-medium clinical response if NEWS2 is not used)

Exclusion criteria

Do not include patients:

- Any patient 64 years of age or under
- Patients with a **Glasgow Coma Scale (GCS) less than 13**
- **NEWS2 score greater than 5** (or your department's equivalent for a medium/high clinical response if NEWS2 is not used)

Definition of inclusion/exclusion criteria

It can be difficult to get access to information about a patient who has been previously treated in the hospital or in the community. Also, the focus on managing immediate risk to life and limb may give priority to making decisions about a patient quickly without formally assessing their cognitive state. Patients with GCS scores less than 13 or NEWS2 over 5 (or equivalent for a medium/high clinical response) are excluded for this reason. If your ED does not use NEWS2, please refer to the NEWS2 thresholds and triggers (5) to find the equivalent using your ED's system.

It may be difficult to distinguish in the ED among delirium, delirium superimposed on dementia or Lewy body dementia. Therefore, the project will include all people presenting with CI. This patient sample is selected as they are the group most at risk.

Forming your QIP team

RCEM recommends forming a multidisciplinary QI team; including consultants, trainees, nursing, pharmacy, SAS, triage and others as needed for the topic and to suit your local set up.

Data entry information

Sample size and data frequency

The RCEM clinical audits have had a major upgrade, providing you with a range of new features and quality improvement tools. These include a live data dashboard, tracking how your data changes weekly on run charts, and the ability to have your own PDSA cycles added to your charts.

Recommended: To maximise the benefit of the new run charts and features RCEM recommends entering **5 cases per week** for patients attending between 1 August – 31 January. This will allow you to see your ED's performance on key measures changing week by week and ensure you get the full benefit of the charts such as your mean performance, upper and lower control limits and trend analysis. Please note that if the system does not have enough weekly data points it will not be able to give a mean performance for your ED as the data will not be robust enough.

Alternative: If your ED will find weekly data entry too difficult to manage you may wish to enter data monthly instead, although you should still ensure that the patient records you sample include patients attending each week within that month. The system will ask you for each patient's arrival date and automatically split your data into weekly arrivals, so you can get the benefit of seeing weekly variation if you spread the cases across the month.

Expected patient numbers	Recommended sample size	Recommended data entry frequency
<5 a week	All patients	Weekly
>5 a week	5 patients	Weekly

Data collection period

Data should be collected on patients attending from 1 August 2019 – 31 January 2020.

RCEM strongly recommends minimising missing data in your final report by ensuring that you submit patient data for as many weeks during the data collection period as possible. This data does not been to be submitted at the same time, but you will find your SPC charts much more useful if you have data that covers as many weeks as possible between 1 August 2019 – 31 January 2020.

Data submission period

Data can be submitted online at the link below from 26 August 2019 – 14 February 2020. You can find the link to log into the data entry site at www.rcem.ac.uk/audits.

Data Sources

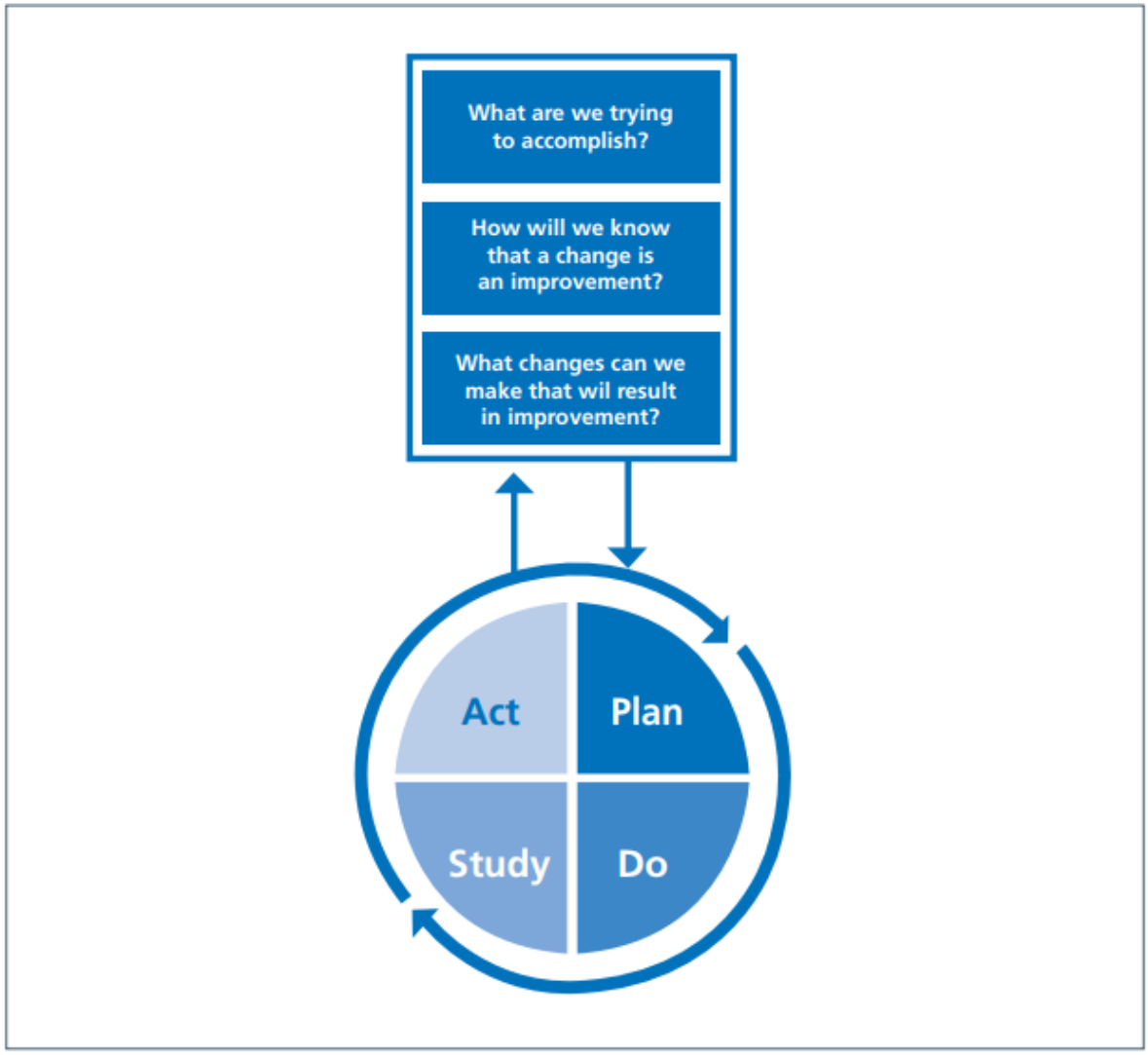
ED patient records including nursing notes (paper, electronic or both).

Quality improvement information

The purpose of this national QIP is to quality assure and quality improve your service where it is not meeting standards. The RCEM system allows your team to record details of quality improvement projects (QIP) and see on your dashboard how each initiative affects your data on key measures.

We strongly encourage you to use this feature to try out QIPs in your department. If you are new to QIPs, we recommend you follow a Plan Do Study Act (PDSA) methodology. The Institute for Healthcare Improvement (IHI) provides a useful worksheet which will help you to think about the changes you want to make and how to implement them.

The model for improvement, IHI



Standards

STANDARD	GRADE
1. There should be written evidence that patients have had an assessment for cognitive impairment during their visit to the ED using a validated national or locally developed tool.	F
2. Whenever cognitive impairment has been identified, there should be documented evidence that the patient was assessed using a delirium bundle.	A
3. Whenever cognitive impairment has been identified, there should be documented evidence that this information was included in the ED discharge letter .	D

Standards definitions

Standard	Definition
Standard 1: validated national or locally developed tool	Validated national tools are: • 4AT – Arousal, Attention, Abbreviated Mental Test 4 • 6-CIT – Six Item Cognitive Impairment Test • AMT – Abbreviated Mental Test • CAM – Confusion Assessment Method • DSD – delirium superimposed on dementia • DRS-98-R – Delirium Rating Scale • DOS - Delirium Observation Screening Scale • ICDSC – Intensive Care Delirium Screening Checklist • Nu-DESC – Nursing Delirium Screening Scale • MMSE – Mini Mental State Examination • RADAR – Recognising Acute Delirium As part of your Routine • mRASS – Modified Richmond Agitation-Sedation Scale • SQiD – Single Question to Identify Delirium Locally developed tools that have been validated are also acceptable.

Grade definition
RCEM no longer sets a target percentage for different grades of standards, but rather encourages ED to review and improve their performance with the aim of achieving standards for all patients.

F - Fundamental: need to be applied by all those who work and serve in the healthcare system. Behaviour at all levels and service provision need to be in accordance with at least these fundamental standards. No provider should provide any service that does not comply with these fundamental standards, in relation to which there should be zero tolerance of breaches.

D - Developmental: set requirements over and above the fundamental standards.
A - Aspirational: setting longer term goals.

Audit questions

Case mix

1.1	Reference (do not enter patient identifiable data)	
1.2	Date and time of arrival or triage – whichever is earlier	dd/mm/yyyy HH:MM
1.3	Age of patient on attendance	65-69
		70-74
		75-79
		80-84
		85-89
		90-94
		95-99
		≥100

Cognitive assessment

2.1	Did a cognitive assessment take place whilst the patient was in the ED?	Yes dd/mm/yyyy HH:MM
		No – unable to assess due to patient's medical condition
		No – unable to assess due to language barrier
		No – other documented reason
		Not recorded
2.2	If Q2.1 = yes Please select assessment tool used	4AT (The 4'A's Test)
		6-CIT (6 item Cognitive Impairment Test)
		AMT (Abbreviated Mental Test)
		CAM (Confusion Assessment Method)
		DOS (Delirium Observation Screening Scale)
		DRS-98-R (Delirium Rating Scale)
		DSD (delirium superimposed on dementia)
		ICDSC (Intensive Care Delirium Screening Checklist)
		MMSE (Mini Mental State Examination)
		mRASS (Modified Richmond Agitation-Sedation Scale)
		Nu-DESC (Nursing Delirium Screening Scale)
		RADAR (Recognising Acute Delirium As part of your Routine)
		SQiD (Single Question to Identify Delirium)
		Other (please state) _____
		No validated tool was used

2.3	If Q2.1 = yes Was cognitive impairment identified?	Yes
		No
		Not recorded

Cognitive impairment identified (only applicable if 2.3 = yes)

3.1	Is there documented evidence that the patient was assessed using a delirium bundle?	Yes No Optional: bundle used _____
3.2	Is there documented evidence that the discharge letter included the identification of a cognitive impairment?	Yes No – the discharge letter did not include the cognitive impairment No – a discharge letter was not sent
3.3	Documented interpretation of score	Normal
		Abnormal – usual level
		Abnormal – new onset or deterioration
		Abnormal – not specified
		Not recorded

Discharge

4.1	Was the patient admitted or discharged?	Admitted to inpatient ward
		Admitted to CDU, ED observation ward or frailty assessment team
		Discharged from ED
		Not recorded
Is there any documented evidence of the cognitive assessment results being shared with the following?		
4.2	GP	Yes
		Not recorded
		Not applicable
4.3	Carer	Yes
		Not recorded
		Not applicable

Notes
Optional space to record any additional notes for local use. Entries here will not be analysed by RCEM.

Definition for questions

Question	Definition
Q4.3: Carer	This includes formal carers, friends or relatives, nursing home, care home, rehab or similar.
Q2.2: Assessment tool	Validated national tools are: • 4AT – Arousal, Attention, Abbreviated Mental Test 4 • 6-CIT – Six Item Cognitive Impairment Test • AMT – Abbreviated Mental Test • CAM – Confusion Assessment Method • DOS - Delirium Observation Screening Scale • DRS-98-R – Delirium Rating Scale • DSD – delirium superimposed on dementia • ICDSC – Intensive Care Delirium Screening Checklist • mRASS – Modified Richmond Agitation-Sedation Scale • MMSE – Mini Mental State Examination • Nu-DESC – Nursing Delirium Screening Scale • RADAR – Recognising Acute Delirium As part of your Routine • SQiD – Single Question to Identify Delirium Locally developed tools that have been validated are also accepted, please select 'Other' if a validated locally developed tool was used.

Evidence base for standards

These standards have been checked for alignment with SIGN 157: Risk reduction and management of delirium (4) and NICE CG103: Delirium: prevention, diagnosis and management (6).

STANDARD	EVIDENCE
1. There should be written evidence that patients have had an assessment for cognitive impairment during their visit to the ED using a validated national or locally developed tool.	NICE CG103 (2019): When people first present to hospital or long-term care, assess them for the following risk factors. If any of these risk factors is present, the person is at risk of delirium. (6) • Age 65 years or older. • Cognitive impairment (past or present) and/or dementia. If cognitive impairment is suspected, confirm it using a standardised and validated cognitive impairment measure. • Current hip fracture. • Severe illness (a clinical condition that is deteriorating or is at risk of deterioration). SIGN 157 (2019): The 4AT tool should be used for identifying patients with probable delirium in emergency department and acute hospital settings. (4) Delirium detection should ideally be undertaken at the earliest opportunity. Numerous assessment tools have been developed to help identify probable delirium in patients in a variety of settings, which can then prompt a more accurate diagnosis and consideration of underlying causes. (4)
2. Whenever cognitive impairment has been identified, there should be documented evidence that the patient was assessed using a delirium bundle	NICE CG103 (2019): Indicators of delirium: at presentation At presentation, assess people at risk for recent (within hours or days) changes or fluctuations in behaviour. (6) If any of these behaviour changes are present, a healthcare professional who is trained and competent in diagnosing delirium should carry out a clinical assessment to confirm the diagnosis. (6)

	In people diagnosed with delirium, identify and manage the possible underlying cause or combination of causes. (6) SIGN 157 (2019): Delirium detection should ideally be undertaken at the earliest opportunity. Numerous assessment tools have been developed to help identify probable delirium in patients in a variety of settings, which can then prompt a more accurate diagnosis and consideration of underlying causes. (4)
3. Whenever cognitive impairment has been identified, there should be documented evidence that this information was included in the ED discharge letter	NICE CG103 (2019): Ensure that the diagnosis of delirium is documented both in the person's hospital record and in their primary care health record. (6) SIGN 157 (2019): Where delirium is detected, the diagnosis of delirium should be clearly documented to aid transfers of care (e.g. handover notes, referral and discharge letters). (4)

Appendix: Analysis plan for standards

This section explains how the RCEM team will be analysing your data. You are welcome to use this analysis plan to conduct local analysis if you wish. Analysis sample tells you which records will be included or excluded from the analysis. The analysis plan tells you how the RCEM team plan to graph the data and which records will meet or fail the standards.

STANDARD	GRADE	Analysis sample	Analysis plan – conditions for the standard to be met
There should be written evidence that patients have had an assessment for cognitive impairment during their visit to the ED using a validated national or locally developed tool	F	All patients	**Chart**: SPC **Title**: Standard 1: Patients had an assessment for cognitive impairment during their visit to the ED using a validated national or locally developed tool. **Analysis**: Met: 2.1 = yes AND Q2.2 = anything other than 'No validated tool was used' Not met: all other answers **Additional charts:** SPC chart showing average time between 1.2 and 2.1 Pie chart of 2.2 answers Pie chart of 2.3 The first SPC chart replicated twice with the following patient sub samples: • patients aged 65-74 only patients aged 75+ only
2. Whenever cognitive impairment has been identified, there should be document evidence that the patient was assessed for delirium	F	2.3 = yes	**Chart**: SPC **Title**: Standard 2: Patients with cognitive impairment were assessed for delirium. **Analysis:** Met: 3.1 = yes Not met: 3.1 = no Additional charts: Pie chart of 3.2 Pie chart of 3.3
3. Whenever cognitive impairment has been identified, there should be documented	D	2.3 = yes AND 4.1 = discharged	**Chart**: SPC **Title**: Standard 3: Cognitive impairment was included in the ED discharge letter. **Analysis:** Met: 4.2 = yes OR

evidence that this information was included in the ED discharge letter			4.3 = yes Not met: all other answers Additional chart: Pie chart of 4.1

Appendix: Privacy policy, terms of website use and website acceptable use policy

Privacy policy
The Royal College of Emergency Medicine (RCEM) recognises the importance of protecting personal information and we are committed to safeguarding members, non-members and staff (known as "The User" in this document) privacy both on-line and off-line. We have instituted policies and security measures intended to ensure that personal information is handled in a safe and responsible manner. This Privacy statement is also published on the RCEM web site so that you can agree to the kind of information that is collected, handled and with whom this data is shared with.

RCEM strive to collect, use and disclose personal information in a manner consistent with UK and European law and under the General Data Protection Regulation (GDPR). This Privacy Policy states the principles that RCEM follows and by accessing or using the RCEM site you agree to the terms of this policy.

For further information, click here.

Terms of website use
For further information, click here.

Website acceptable use policy
For further information, click here.

References

1. *Delirium in hospitalized older adults.* ER, Marcantonio. 15, 2017, N Engl J Med, Vol. 377, pp. 1456-66.
2. *Observational, longitudinal study of delirium in consecutive unselected acute medical admissions: age-specific rates and associated factors, mortality and re-admission.* Pendlebury ST, Lovett NG, Smith SC, Dutta N, Bendon C, Lloyd-Lavery A, et al. 11, 2015, BMJ Open, Vol. 5, p. e007808.
3. *New institutionalisation following acute hospital admission: a retrospective cohort study.* Harrison JK, Garrido AG, Rhynas SJ, Logan G, MacLullich AM, MacArthur J, et al. 2, 2017, Age Ageing, Vol. 46, pp. 238-44.
4. *Guideline 157: Risk reduction and management of delirium.* SIGN. March 2019.
5. Royal College of Physicians. *National Early Warning Score (NEWS) 2.* 2017.
6. NICE. *Delirium: prevention, diagnosis and management (CG103).* 2019.