Delirium

Study protocol – October 2026

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Introduction

Delirium is condition that presents with abrupt confusion, behavioural change and drowsiness. It is sometimes referred to as an acute confusional state. Delirium is a very common condition and its incidence ranges from 29-64% (1) in general and care of the elderly wards to 80% in specialised intensive care environments. A national review of delirium is needed and timely because of the impact it has on people, health and social care.

Although coding for delirium has improved the last decade (2) it remains under-reported. Furthermore, formal screening is poor and has declined in recent years. When left undetected and poorly managed the associated health burden is huge. Delirium impacts a range of healthcare outcomes across all specialisms and is frequently cited as a factor in mortality in Structured Judgement mortality reviews (Yorkshire and Humber Mortality Collaborative 2024, unpublished). The Royal College of Physicians (RCP) hosts the Falls and Fragility Fracture Audit Programme (FFFAP). Within this, delirium is recognised as a significant contributory factor and is therefore routinely monitored. The National Hip Fracture Database (NHFD) has shown that >25% of people develop delirium after admission with a hip fracture and that patients who develop delirium face a doubling of mortality, and a quadrupling of need for new care home placement. Screening is therefore routinely performed for all people presenting with hip fracture but is rarely performed elsewhere. For example, the RCP's National Audit of Inpatient Falls (NAIF) has identified delirium as a key avoidable risk factor for people sustaining injurious inpatient falls; however, NAIF has shown that delirium screening (except among people with hip fracture) is now happening less frequently than previously.

In addition to direct harms there is a major organisational and operational burden; in the UK patients with delirium face increased length of stay, and each case carries an excess cost of around £13,000 (1). Estimates of the total cost burden of delirium in the USA range from £112 billion to £120 billion per annum (3) whilst in Australia in 2016-17 the estimate of the total cost burden was £4.3 billion (4).

References

1. NHSE: A delirium curriculum for Acute Hospital Staff 2018
2. Ibitoye et al. Trends in delirium coding rates in older hospital inpatients in England and Scotland. Delirium Communications July 29, 2023
3. Leslie and Inouye, The Importance of Delirium: Economic and Societal Costs. J Am Geriatric Soc 2011 Nov 59(Suppl2) S241-243
4. Pezzullo et al. Economic impact of delirium in Australia: a cost of illness study. BMJ Open 2019 Sep 17 9(9)

Guidelines and standards

NICE CGO3: Delirium: prevention, diagnosis and management in hospital and long-term care
NICE QS63: Delirium in adults
ICS Guidance for Delirium in the critically ill patient
SIGN 157: Risk reduction and management of delirium
BGS Silver Book II Quality care for older people with urgent care needs

Aim and objectives

Aim

To identify good practice and areas for improvement in the quality of care for patients with delirium in hospital

Objectives

Organisational issues

Data collected from the organisational questionnaire

- Protocols, standards and guidelines for the prevention, identification and management of delirium
- Hospital care pathways including the assessment and management of delirium in different ward settings
- Screening tools used for delirium (4AT, CAM-ICU, ICDSC) and risk scoring tools
- Use of delirium bundles
- Staffing
    - Involvement of specialist teams
    - Multidisciplinary team working
    - Availability and status of mandatory training
- Deprivation of Liberty Safeguards (DoLS) processes
- Audit of standards/ guidelines/ Quality measures used to evaluate delirium-related outcomes
- Longer term follow up

Clinical issues

Data collected from the clinical questionnaire, the reviewer assessment form and clinician survey

To explore and investigate areas for improvement in the following areas:

- Causes of delirium: structured assessment considering full range of causes (e.g. PINCH ME; Pain, Infection, Nutrition, Constipation, Hydration, Medication, and Environment)
- Risk stratification including predisposing vs precipitating factors (age, MUST score, dementia, previous delirium, frailty, surgical status, poly pharmacy, excess alcohol use)
- Investigation and imaging
- Identification and screening across clinical areas, including frequency of monitoring and transitions of care
- Nursing and delirium-specific care plans and escalation of findings
- Communication at handovers, including post-critical care and discharge summaries
- Treatment and management strategies, including care bundle use, mental capacity assessment, DOLS, and treatment as a medical emergency
- Delirium care bundles (pharmacological and non-pharmacological approaches, de-prescribing plans, continuation of medication after resolution, and expected timeframes for resolution)
- Delirium prevention
- Missed opportunities and delays in evaluation or treatment
- Post-delirium complications: (falls, fractures, delays, unnecessary medications, failure to return home, death, mental health, deconditioning, and nutritional status)

- Delerium in advanced illness and at the end of life
- Serious adverse events
- Follow-up: adherence to SIGN guideline recommendations, mention in discharge summary, GP notification and mechanisms to evaluate longer-term outcomes
- Information provided to patients, relatives and carers regarding delirium
- Readmissions
- Examples of good practice

Methods

Inclusion criteria

All patients aged 18 and over, who were who were admitted to hospital between the 1st January - 31st March 2026 inclusive and diagnosed with delirium as an inpatient. The patient population will include emergency and electively admitted patients, a cohort of which will have developed delirium after a surgical procedure.

ICD10 coding will be used to retrospectively identify patients (see Tables 1 and 2).

Exclusions

Day cases and same day admissions will be excluded from the study.

Data sampling

Up to 8 cases per hospital will be included for questionnaire completion and peer review.

Participating providers of healthcare

Data will be collected from all acute and relevant community NHS hospitals in England, Wales, Northern Ireland and Jersey. Independent hospitals which provide elective surgery are also included.

Incidence and prevalence

Table 1: HES data: Number of inpatient episodes of delirium for 2024/5

ICD10 Code	Description	Finished Admission 2024/5	Median LOS (Days)	Mean age (Years)	Emergency admissions
F05.0	Delirium not superimposed on dementia, so described	3,380	9	82	3,330
F05.1	Delirium superimposed on dementia	9,761	11	84	9,620
F05.8	Other delirium Delirium of mixed origin Postoperative delirium	2,829	10	82	2,769
F05.9	Delirium, unspecified	14,573	8	81	14,255

Study scoping

A scoping exercise was undertaken to provide further detail on the numbers of patients who were diagnosed with delirium as inpatients. A spreadsheet was circulated to Trusts and Health boards to return some basic data about the patients who were diagnosed with delirium as an inpatient between 01/01/2026-31/03/2026, including length of hospital stay, critical care admission, whether a procedure was undertaken (OPSC codes) and outcome.

No patient identifiable information was collected.

35,766 inpatient episodes were identified over the 3 month period from 78 Trusts and Health boards (independent hospitals did not return scoping data).

- 1,785 (5.0%) patients had multiple admissions over this period
- The average age was 81.4 years
- F05.9, Delirium unspecified was the commonest study related ICD10 code (16,794/35584; 47.2%)
- The majority of admissions were emergency (34,228/35,758; 95.7%), compared to 1302/35,758; 3.6% elective admissions
- 1,646/31185; 5.3% patients had a critical care admission
- The average length of stay was 21 days

Study promotion

Prior to data collection, NCEPOD will contact all hospitals providing care to this group of patients.

The study will be promoted via NCEPOD Local Reporters (by disseminating the study poster on to the relevant departments), the relevant Colleges and Associations, and any relevant patient groups and third sector organisations.

Study method test

The data collection methods and tools will be tested to ensure they are robust to collect sufficient information to address the study objectives before the full study is undertaken.

Methods of data collection

There will be five main methods of collecting data for the study:

1. Patient and carer views will be collected through an online anonymous survey. We will work with Local Reporters, study contacts and relevant charities to encourage involvement.
2. Clinician views will be collected though an anonymous online survey for healthcare professionals who treat patients with delirium. This questionnaire will be targeted at, but not limited to, clinicians and allied health professionals working in hospitals who treat patients with delirium.
3. An organisational questionnaire will be sent to all hospitals that treat patients with delirium.
4. Clinical data collection – retrospective data collection:
   For a sample of patients, a questionnaire will be sent to the clinician responsible for the patient at the time of discharge (clinician questionnaire).
5. Case note review: Copies of the relevant case notes for the admission(s) with delirium for the sample of patients selected above will be collected for detailed peer review. Reviewers' opinion on the quality of care provided will be collected through completion of the Reviewer Assessment Form.

Further details on the methods of each method of data collection are given below:

1. Anonymous online patient/carer survey

The survey will gather data on the patient/ carer views of the services available to them and their experience of delirium management. It will also collect information about support services and information they were provided.
The data will not be linked to any other aspects of data collection.

2. *Anonymous online clinician survey*
   The survey will gather data on clinician views of the services available for them to provide care to patients who require delirium management. It will also collect information around confidence, competency, training and support available when providing care to this group of patients.
   The data will not be linked to any other aspects of data collection.
3. *Organisational questionnaire*
   Data will be collected at a hospital level and will collect information around decision making tools, the organisation of services, protocols and pathways and networks of care, transfer, staffing arrangements, the availability of information, training, audit and data collection. An organisational questionnaire will be sent to all participating hospitals via the online questionnaire system.
4. *Clinical data collection – retrospective data collection*
   Patient identification
   The Local Reporter will be asked to complete the patient identification spreadsheet with the details of all patients meeting the study inclusion criteria.

Table 2: Included ICD10 Codes

ICD10	Description
F05.0	Delirium not superimposed on dementia, so described
F05.1	Delirium superimposed on dementia
F05.8	Other delirium
F05.9	Delirium, unspecified

The data fields requested will include NHS number, hospital number, date of birth, sex, ethnicity, date of admission, source of admission, ICD10 codes, OPCS codes, critical care admission, discharge destination, date of discharge, clinician code and specialty for the consultant responsible at the time of the discharge.

Clinician questionnaires

A clinician questionnaire will be used to collect clinical data that may not be found in the case notes for this study. It will have key questions about the care this patient received before, during and after their presentation with delirium. Clinician questionnaires are completed by the relevant consultant responsible for the patient during their admission via the NCEPOD online questionnaire portal.

Questionnaires will be sent to the NCEPOD Local Reporter for dissemination via the online questionnaire system. A reminder will be sent at six weeks and ten weeks where the data is outstanding. Up to 8 patients per hospital will be sampled for inclusion in the study.

5. *Case note review*

Photocopied/scanned/downloaded case notes related to the admission with delirium will be requested for each patient included in the study sample.

Notes requested will include:

- Ambulance patient report form
- Emergency department notes
- Medical, nursing and other notes from arrival/admission to discharge
- Imaging reports
- Operation notes (if applicable)
- Observation charts (including fluid balance charts)
- Consent forms (should be in medical notes but would state specifically)
- Investigation results
- Drug charts
- Anaesthetic charts and notes (if applicable)
- Discharge summary
- Follow up letters/clinic notes
- Pre-operative clinic notes (for elective patients only)
- Discharge summaries in the 30 days prior to the index admission
- Discharge summaries for the 30 days post index admission

Upon receipt at NCEPOD the case notes will be redacted if not already done so prior to sending.

Reviewer assessment form

A multidisciplinary group of reviewers (detailed below) will be recruited to assess the case notes and questionnaires and provide their opinion on what went well and what did not go well during the process of care via the reviewer assessment form.

Table 3: Data sources for significant points along the pathway:

Area of enquiry	Method of data collection	Confidentiality
Acute care	Case notes, clinician and organisational questionnaire	Identifiable
	Online clinician survey	Anonymous

Table 4: Anticipated sample sizes of each type of data collected:

Data source	Target number
Organisational questionnaire	~200
Clinician questionnaire	Up to a maximum of 8 per hospital
Case note review	Up to a maximum of 8 per hospital
Clinician online survey (non-identifiable)	300
Patient/ carer survey	Up to 100

Reviewers

A multidisciplinary group of reviewers will be recruited to assess the case notes and questionnaires and provide their opinion on what went well and what did not go well during the admission.

- Acute physicians

- Advanced nurse practitioner/ advanced clinical practitioners
- General nurses
- General physicians
- Geriatricians and other Specialists in the Care of the Older person
- Liaison psychiatrists
- General physicians
- Physiotherapists
- Resident doctors
- Speech and language therapy
- Occupational therapists

An advertisement will be sent to NCEPOD Local Reporters to disseminate throughout the relevant departments. It will also be placed on the NCEPOD website and social media channels. Successful applicants will be asked to attend a training day where they will each assess cases to ensure consistent assessment. A number of case review meeting dates will be arranged, and each reviewer will then be asked to attend a minimum of a further 4 meetings. NCEPOD staff will ensure there is a mix of specialties at each meeting from across the UK. Each meeting will be chaired by an NCEPOD clinical coordinator who will lead discussion around the cases under review. The meetings will either be held in person in the NCEPOD office, or over Microsoft Teams with secure and temporary access to the case notes for review (not downloadable or printable by the case reviewer).

Confidentiality and data protection

All electronic data are held in password protected files and all paper documents in locked filing cabinets. As soon as possible after receipt of data NCEPOD will encrypt electronic identifiers and anonymise paper documents. Section 251 approval has been obtained to perform this study without the use of patient consent in England and Wales.

Ethical approval will not be required to undertake this study. Duty of candour is covered by the NCEPOD Cause for Concern policy, which ensure that any cases reviewed as less that satisfactory and as a cause for concern are discussed and action taken where required.

Analysis and Review of Data

Towards the end of the study the study advisory group and case note reviewers will be invited to attend a meeting where the initial data analysis will be presented and discussed with them, for comment and suggestion on whether further analysis is required and the potential study recommendations.

The NCEPOD steering group, NCEPOD clinical and non-clinical coordinators, study advisory group and case note reviewers will be sent two copies of the draft report and the draft recommendations for their comment.

Study outputs

On completion of the study a report will be published and widely disseminated to all stakeholders to encourage local quality improvement (QI). In addition to the report, supporting tools will be made available including:

- A summary report and summary sheet
- A patient information leaflet
- Infographics
- The recommendation checklist
- An audit tool
- A slide set
- A guide for commissioners
- Quality improvement tools
- Useful links

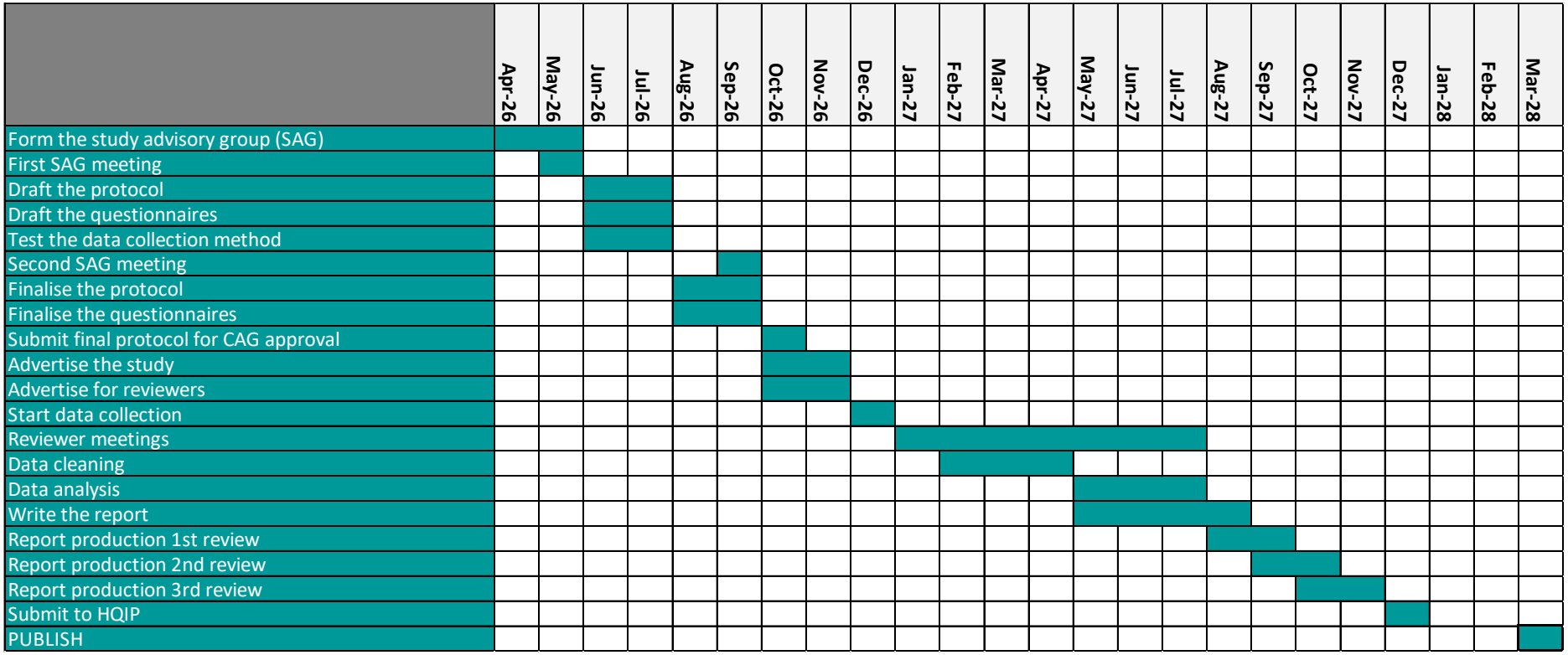
Examples of good practice will be shared, and additional QI tools will be developed where appropriate. Key messages from the report will be shared via social media.

Following publication, the report findings will be shared at national and local conferences, study days and other events; and papers submitted to journal for consideration for publication.

Data sharing

Post publication of the study there is the potential to share anonymised data sets with interested parties working in the same field. This will be undertaken following a strict process and will ensure the data does not become identifiable in their nature due to small numbers.

Timescale


Apr-26
May-26
Jun-26
Jul-26
Aug-26
Sep-26
Oct-26
Nov-26
Dec-26
Jan-27
Feb-27
Mar-27
Apr-27
May-27
Jun-27
Jul-27
Aug-27
Sep-27
Oct-27
Nov-27
Dec-27
Jan-28
Feb-28
Mar-28
Form the study advisory group (SAG)
First SAG meeting
Draft the protocol
Draft the questionnaires
Test the data collection method
Second SAG meeting
Finalise the protocol
Finalise the questionnaires
Submit final protocol for CAG approval
Advertise the study
Advertise for reviewers
Start data collection
Reviewer meetings
Data cleaning
Data analysis
Write the report
Report production 1st review
Report production 2nd review
Report production 3rd review
Submit to HQIP
PUBLISH