

Issue date: July 2010

# **Delirium**

**Delirium: diagnosis, prevention and  
management**

## **NICE clinical guideline 103 Delirium: diagnosis, prevention and management**

### **Ordering information**

You can download the following documents from

[www.nice.org.uk/guidance/CG103/PublicInfo](http://www.nice.org.uk/guidance/CG103/PublicInfo)

- The NICE guideline (this document) – all the recommendations.
- A quick reference guide – a summary of the recommendations for healthcare professionals.
- ‘Understanding NICE guidance’ – a summary for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or ‘Understanding NICE guidance’, phone NICE publications on 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote:

- N2224 (quick reference guide)
- N2225 (‘Understanding NICE guidance’).

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

### **National Institute for Health and Clinical Excellence**

MidCity Place  
71 High Holborn  
London WC1V 6NA

[www.nice.org.uk](http://www.nice.org.uk)

© National Institute for Health and Clinical Excellence, 2010. All rights reserved. This material may be freely reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of NICE

## Contents

Introduction .....	4
Person-centred care .....	6
Key priorities for implementation.....	7
1 Guidance .....	10
Think delirium .....	10
1.1 Risk factor assessment.....	10
1.2 Indicators of delirium: at presentation .....	11
1.3 Interventions to prevent delirium.....	12
1.4 Indicators of delirium: daily observations .....	14
1.5 Diagnosis (specialist clinical assessment) .....	15
1.6 Treating delirium .....	15
1.7 Information and support.....	17
2 Notes on the scope of the guidance .....	18
3 Implementation.....	19
4 Research recommendations.....	19
4.1 Pharmacological prevention.....	19
4.2 Pharmacological treatment .....	20
4.3 Multicomponent intervention .....	20
4.4 Delirium in long-term care.....	21
4.5 Education programme.....	22
5 Other versions of this guideline .....	22
6 Related NICE guidance.....	23
7 Updating the guideline.....	24
Appendix A: The Guideline Development Group and NICE project team .....	25
Appendix B: The Guideline Review Panel .....	28
Appendix C: The algorithms.....	29

## Introduction

Delirium (sometimes called 'acute confusional state') is a common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course. It usually develops over 1–2 days. It is a serious condition that is associated with poor outcomes. However, it can be prevented and treated if dealt with urgently.

A person may already have delirium when they present to hospital or long-term care or it may develop during a hospital admission or residential stay in long-term care. Delirium can be hypoactive or hyperactive but some people show signs of both (mixed). People with hyperactive delirium have heightened arousal and can be restless, agitated and aggressive. People with hypoactive delirium become withdrawn, quiet and sleepy. Hypoactive and mixed delirium can be more difficult to recognise.

It can be difficult to distinguish between delirium and dementia and some people may have both conditions. If clinical uncertainty exists over the diagnosis, the person should be managed initially for delirium.

Older people and people with dementia, severe illness or a hip fracture are more at risk of delirium. The prevalence of delirium in people on medical wards in hospital is about 20% to 30%, and 10% to 50% of people having surgery develop delirium. In long-term care the prevalence is under 20%. But reporting of delirium is poor in the UK, indicating that awareness and reporting procedures need to be improved.

There is a significant burden associated with this condition. Compared with people who do not develop delirium, people who develop delirium may:

- need to stay longer in hospital or in critical care
- have an increased incidence of dementia
- have more hospital-acquired complications, such as falls and pressure sores

- be more likely to need to be admitted to long-term care if they are in hospital
- be more likely to die.

This clinical guideline describes methods of preventing, identifying, diagnosing and treating delirium. In particular, the guideline focuses on preventing delirium in people identified to be at risk, using a targeted, multicomponent, non-pharmacological intervention that addresses a number of modifiable risk factors ('clinical factors').

If delirium is prevented, it should generate cost savings.

This guideline does not cover children and young people (younger than 18 years), people receiving end-of-life care, or people with intoxication and/or withdrawing from drugs or alcohol, and people with delirium associated with these states. For more information see section 2 'Notes on the scope of the guidance'.

The guideline will assume that prescribers will use a drug's summary of product characteristics to inform decisions made with individual people.

## Person-centred care

This guideline offers best practice advice on the prevention of delirium in adults in hospital or long-term care who are at risk of delirium, and on the care of adults in hospital or long-term care who develop delirium.

Treatment and care should take into account people's needs and preferences. People with delirium or at risk of delirium should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If people do not have the capacity to make decisions, healthcare professionals should follow the Department of Health's advice on consent (available from [www.dh.gov.uk/consent](http://www.dh.gov.uk/consent)) and the code of practice that accompanies the Mental Capacity Act (summary available from [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk)). In Wales, healthcare professionals should follow advice on consent from the Welsh Assembly Government (available from [www.wales.nhs.uk/consent](http://www.wales.nhs.uk/consent)). Good communication between healthcare professionals and people in their care is essential. It should be supported by evidence-based written information tailored to the person's needs. Treatment and care, and the information people are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

If the person agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Families and carers should also be given the information and support they need.

## Key priorities for implementation

### Risk factor assessment

- 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.
  - Age 65 years or older.
  - Cognitive impairment (past or present) and/or dementia<sup>1</sup>. 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)<sup>2</sup>.

### Indicators of delirium: at presentation

- At presentation, assess people at risk for recent (within hours or days) changes or fluctuations in behaviour. These may be reported by the person at risk, or a carer or relative. Be particularly vigilant for behaviour indicating hypoactive delirium (marked \*). These behaviour changes may affect:
  - Cognitive function: for example, worsened concentration\*, slow responses\*, confusion.
  - Perception: for example, visual or auditory hallucinations.
  - Physical function: for example, reduced mobility\*, reduced movement\*, restlessness, agitation, changes in appetite\*, sleep disturbance.
  - Social behaviour: for example, lack of cooperation with reasonable requests, withdrawal\*, or alterations in communication, mood and/or attitude.

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.

---

<sup>1</sup> If dementia is suspected, refer to further information on the diagnosis, treatment and care of people with dementia in 'Dementia: supporting people with dementia and their carers in health and social care' (NICE clinical guideline 42).

<sup>2</sup> For further information on recognising and responding to acute illness in adults in hospital see 'Acutely ill patients in hospital' (NICE clinical guideline 50).

### **Interventions to prevent delirium**

- Ensure that people at risk of delirium are cared for by a team of healthcare professionals who are familiar to the person at risk. Avoid moving people within and between wards or rooms unless absolutely necessary.
- Give a tailored multicomponent intervention package:
  - Within 24 hours of admission, assess people at risk for clinical factors contributing to delirium.
  - Based on the results of this assessment, provide a multicomponent intervention tailored to the person's individual needs and care setting as described in recommendations 1.3.3.1–1.3.3.10.
- The tailored multicomponent intervention package should be delivered by a multidisciplinary team trained and competent in delirium prevention.

### **Diagnosis (specialist clinical assessment)**

- If indicators of delirium are identified, carry out a clinical assessment based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria or short Confusion Assessment Method (short CAM) to confirm the diagnosis. In critical care or in the recovery room after surgery, CAM-ICU should be used. A healthcare professional who is trained and competent in the diagnosis of delirium should carry out the assessment. If there is difficulty distinguishing between the diagnoses of delirium, dementia or delirium superimposed on dementia, treat for delirium first.
- Ensure that the diagnosis of delirium is documented both in the person's hospital record and in their primary care health record.

### **Initial management**

- In people diagnosed with delirium, identify and manage the possible underlying cause or combination of causes.
- Ensure effective communication and reorientation (for example, explaining where the person is, who they are, and what your role is) and provide reassurance for people diagnosed with delirium. Consider involving family, friends and carers to help with this. Provide a suitable care environment (see recommendation 1.3.1).

### **Distressed people**

- If a person with delirium is distressed or considered a risk to themselves or others and verbal and non-verbal de-escalation techniques are ineffective or inappropriate, consider giving short-term (usually for 1 week or less) haloperidol<sup>3</sup> or olanzapine<sup>3</sup>. Start at the lowest clinically appropriate dose and titrate cautiously according to symptoms.

---

<sup>3</sup> Haloperidol and olanzapine do not have UK marketing authorisation for this indication.

# 1 Guidance

The following guidance is based on the best available evidence. The full guideline ([www.nice.org.uk/guidance/CG103/Guidance](http://www.nice.org.uk/guidance/CG103/Guidance)) gives details of the methods and the evidence used to develop the guidance.

The Guideline Development Group used the following definitions in this guideline.

- Hyperactive delirium: a subtype of delirium characterised by people who have heightened arousal and can be restless, agitated or aggressive.
- Hypoactive delirium: a subtype of delirium characterised by people who become withdrawn, quiet and sleepy.
- Multidisciplinary team: a team of healthcare professionals with the different clinical skills needed to offer holistic care to people with complex problems such as delirium.
- Long-term care: residential care in a home that may include skilled nursing care and help with everyday activities. This includes nursing homes and residential homes.

## ***Think delirium***

Be aware that people in hospital or long-term care may be at risk of delirium. This can have serious consequences (such as increased risk of dementia and/or death) and, for people in hospital, may increase their length of stay in hospital and their risk of new admission to long-term care.

### **1.1 Risk factor assessment**

1.1.1 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.

- Age 65 years or older.

- Cognitive impairment (past or present) and/or dementia<sup>4</sup>. 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)<sup>5</sup>.

1.1.2 Observe people at every opportunity for any changes in the risk factors for delirium.

## **1.2 *Indicators of delirium: at presentation***

1.2.1 At presentation, assess people at risk for recent (within hours or days) changes or fluctuations in behaviour. These may be reported by the person at risk, or a carer or relative. Be particularly vigilant for behaviour indicating hypoactive delirium (marked \*). These behaviour changes may affect:

- Cognitive function: for example, worsened concentration\*, slow responses\*, confusion.
- Perception: for example, visual or auditory hallucinations.
- Physical function: for example, reduced mobility\*, reduced movement\*, restlessness, agitation, changes in appetite\*, sleep disturbance.
- Social behaviour: for example, lack of cooperation with reasonable requests, withdrawal\*, or alterations in communication, mood and/or attitude.

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.

---

<sup>4</sup> If dementia is suspected, refer to further information on the diagnosis, treatment and care of people with dementia in 'Dementia: supporting people with dementia and their carers in health and social care' (NICE clinical guideline 42).

<sup>5</sup> For further information on recognising and responding to acute illness in adults in hospital see 'Acutely ill patients in hospital' (NICE clinical guideline 50).

### **1.3 *Interventions to prevent delirium***

1.3.1 Ensure that people at risk of delirium are cared for by a team of healthcare professionals who are familiar to the person at risk. Avoid moving people within and between wards or rooms unless absolutely necessary.

1.3.2 Give a tailored multicomponent intervention package:

- Within 24 hours of admission, assess people at risk for clinical factors contributing to delirium.
- Based on the results of this assessment, provide a multicomponent intervention tailored to the person's individual needs and care setting as described in recommendations 1.3.3.1–1.3.3.10.

1.3.3 The tailored multicomponent intervention package should be delivered by a multidisciplinary team trained and competent in delirium prevention.

1.3.3.1 Address cognitive impairment and/or disorientation by:

- providing appropriate lighting and clear signage; a clock (consider providing a 24-hour clock in critical care) and a calendar should also be easily visible to the person at risk
- talking to the person to reorientate them by explaining where they are, who they are, and what your role is
- introducing cognitively stimulating activities (for example, reminiscence)
- facilitating regular visits from family and friends.

1.3.3.2 Address dehydration and/or constipation by:

- ensuring adequate fluid intake to prevent dehydration by encouraging the person to drink – consider offering subcutaneous or intravenous fluids if necessary

- taking advice if necessary when managing fluid balance in people with comorbidities (for example, heart failure or chronic kidney disease).
- 1.3.3.3 Assess for hypoxia and optimise oxygen saturation if necessary, as clinically appropriate.
- 1.3.3.4 Address infection by:
- looking for and treating infection
  - avoiding unnecessary catheterisation
  - implementing infection control procedures in line with ‘Infection control’ (NICE clinical guideline 2).
- 1.3.3.5 Address immobility or limited mobility through the following actions:
- Encourage people to:
    - mobilise soon after surgery
    - walk (provide appropriate walking aids if needed – these should be accessible at all times).
  - Encourage all people, including those unable to walk, to carry out active range-of-motion exercises.
- 1.3.3.6 Address pain by:
- assessing for pain
  - looking for non-verbal signs of pain, particularly in those with communication difficulties (for example, people with learning difficulties or dementia, or people on a ventilator or who have a tracheostomy)
  - starting and reviewing appropriate pain management in any person in whom pain is identified or suspected.

- 1.3.3.7 Carry out a medication review for people taking multiple drugs, taking into account both the type and number of medications.
- 1.3.3.8 Address poor nutrition by:
- following the advice given on nutrition in ‘Nutrition support in adults’ (NICE clinical guideline 32)
  - if people have dentures, ensuring they fit properly.
- 1.3.3.9 Address sensory impairment by:
- resolving any reversible cause of the impairment, such as impacted ear wax
  - ensuring hearing and visual aids are available to and used by people who need them, and that they are in good working order.
- 1.3.3.10 Promote good sleep patterns and sleep hygiene<sup>6</sup> by:
- avoiding nursing or medical procedures during sleeping hours, if possible
  - scheduling medication rounds to avoid disturbing sleep
  - reducing noise to a minimum during sleep periods.

## **1.4 Indicators of delirium: daily observations**

- 1.4.1 Observe, at least daily, all people in hospital or long-term care for recent (within hours or days) changes or fluctuations in usual behaviour (see recommendation 1.2.1). These may be reported by the person at risk, or a carer or relative.

If any of these behaviour changes is present, a healthcare professional who is trained and competent in the diagnosis of

---

<sup>6</sup> For more information on good sleep hygiene, see ‘Parkinson’s disease’ (NICE clinical guideline 35).

delirium should carry out a clinical assessment to confirm the diagnosis.

## **1.5 *Diagnosis (specialist clinical assessment)***

- 1.5.1 If indicators of delirium are identified, carry out a clinical assessment based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria or short Confusion Assessment Method (short CAM) to confirm the diagnosis. In critical care or in the recovery room after surgery, CAM-ICU should be used. A healthcare professional who is trained and competent in the diagnosis of delirium should carry out the assessment. If there is difficulty distinguishing between the diagnoses of delirium, dementia or delirium superimposed on dementia, treat for delirium first.
- 1.5.2 Ensure that the diagnosis of delirium is documented both in the person's hospital record and in their primary care health record.

## **1.6 *Treating delirium***

### **Initial management**

- 1.6.1 In people diagnosed with delirium, identify and manage the possible underlying cause or combination of causes.
- 1.6.2 Ensure effective communication and reorientation (for example explaining where the person is, who they are, and what your role is) and provide reassurance for people diagnosed with delirium. Consider involving family, friends and carers to help with this. Provide a suitable care environment (see recommendation 1.3.1).

### **Distressed people**

- 1.6.3 If a person with delirium is distressed or considered a risk to themselves or others, first use verbal and non-verbal techniques to de-escalate the situation. For more information on de-escalation techniques, see 'Violence' (NICE clinical guideline 25). Distress

may be less evident in people with hypoactive delirium, who can still become distressed by, for example, psychotic symptoms.

- 1.6.4 If a person with delirium is distressed or considered a risk to themselves or others and verbal and non-verbal de-escalation techniques are ineffective or inappropriate, consider giving short-term (usually for 1 week or less) haloperidol<sup>7</sup> or olanzapine<sup>7</sup>. Start at the lowest clinically appropriate dose and titrate cautiously according to symptoms.
- 1.6.5 Use antipsychotic drugs with caution or not at all for people with conditions such as Parkinson's disease or dementia with Lewy bodies<sup>8</sup>.

**If delirium does not resolve**

- 1.6.6 For people in whom delirium does not resolve:
- Re-evaluate for underlying causes.
  - Follow up and assess for possible dementia<sup>9</sup>.

---

<sup>7</sup> Haloperidol and olanzapine do not have UK marketing authorisation for this indication.

<sup>8</sup> For more information on the use of antipsychotics for these conditions, see 'Parkinson's disease' (NICE clinical guideline 35) and 'Dementia' (NICE clinical guideline 42).

<sup>9</sup> For more information on dementia, see 'Dementia' (NICE clinical guideline 42).

## **1.7 Information and support**

1.7.1 Offer information to people who are at risk of delirium or who have delirium, and their family and/or carers, which:

- informs them that delirium is common and usually temporary
- describes people's experience of delirium
- encourages people at risk and their families and/or carers to tell their healthcare team about any sudden changes or fluctuations in behaviour
- encourages the person who has had delirium to share their experience of delirium with the healthcare professional during recovery
- advises the person of any support groups.

1.7.2 Ensure that information provided meets the cultural, cognitive and language needs of the person.

## 2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from [www.nice.org.uk/guidance/CG103](http://www.nice.org.uk/guidance/CG103) – click on ‘How this guidance was produced’.

The Department of Health asked NICE:

‘To prepare a clinical guideline on the diagnosis, prevention and management of delirium.’

Groups that will be covered:

- Adults (18 years and older) in hospital.
- Adults (18 years and older) in long-term residential care.

Groups that will not be covered:

- Children and young people (younger than 18 years).
- People receiving end-of-life care.
- People with intoxication and/or withdrawing from drugs or alcohol, and people with delirium associated with these states.

### **How this guideline was developed**

NICE commissioned the National Clinical Guideline Centre (NCGC) to develop this guideline. The Centre established a guideline development group (see appendix A), which reviewed the evidence and developed the recommendations. An independent Guideline Review Panel oversaw the development of the guideline (see appendix B).

There is more information about how NICE clinical guidelines are developed on the NICE website ([www.nice.org.uk/howwework](http://www.nice.org.uk/howwework)). A booklet, ‘How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS’ (fourth edition, published 2009), is available from NICE publications (phone 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote reference N1739).

### **3 Implementation**

NICE has developed tools to help organisations implement this guidance (see [www.nice.org.uk/guidance/CG103](http://www.nice.org.uk/guidance/CG103)).

### **4 Research recommendations**

The Guideline Development Group has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future. The Guideline Development Group's full set of research recommendations is detailed in the full guideline (see section 5).

#### **4.1 *Pharmacological prevention***

In people in hospital who are at high risk of delirium, which medication (atypical antipsychotics, typical antipsychotics, benzodiazepines or acetylcholinesterase inhibitors), compared with placebo or each other, is more clinically and cost effective in preventing the development of delirium?

#### **Why this is important**

The serious nature of delirium and its consequences makes it important to establish all methods of prevention. Pharmacological agents may be a simple preventive treatment for delirium, but there is uncertainty about effectiveness and side effects so they should be used with caution. The evidence is limited: three low-quality studies were found, each of which was unrepresentative either of the population or the medication used, but there was some indication of clinical effectiveness. A large randomised trial (with at least 100 people in each arm) should be conducted in people in hospital who are at high risk of delirium to compare atypical antipsychotics, typical antipsychotics, benzodiazepines or acetylcholinesterase inhibitors with placebo, or each other, for preventing delirium. The included populations should be defined in terms of their delirium risk (for example people at high risk could be those with two or more risk factors for delirium). The primary outcome should be the incidence of delirium, measured at least daily using a validated diagnostic tool. The severity and duration of delirium should also be recorded, together

with adverse effects of the medication, notably extrapyramidal symptoms and stroke.

## **4.2      *Pharmacological treatment***

In people in hospital who have delirium, which is the most effective medication (atypical antipsychotics, typical antipsychotics or benzodiazepines) compared with placebo or each other for treating delirium?

### **Why this is important**

Pharmacological interventions are currently used in clinical practice to manage the symptoms of delirium but the evidence for this is limited. One moderate-quality study showed that typical and atypical antipsychotics were clinically and cost effective compared with placebo, but there is no evidence for benzodiazepines. Pharmacological agents that alter the course of delirium or control particular symptoms might be useful in treating delirium, but we need to determine whether the medication should be given routinely or for selected symptoms, and what adverse events may occur. A large randomised trial (with at least 100 people in each arm) should be conducted in people in hospital with delirium to compare atypical antipsychotics, typical antipsychotics, or benzodiazepines with placebo, or each other, for the treatment of delirium. The outcomes should be recovery from delirium (complete response), and the duration and severity of delirium, measured using a validated diagnostic tool. Adverse events, notably extrapyramidal symptoms and stroke, should also be recorded.

## **4.3      *Multicomponent intervention***

For people in long-term care, is a multicomponent non-pharmacological intervention more clinically and cost effective than usual care in preventing the development of delirium?

### **Why this is important**

Although there is moderate-quality evidence of clinical and cost effectiveness for multicomponent interventions for the prevention of delirium in people in hospital, there is no evidence in a long-term care setting. It is anticipated that such an intervention would benefit this long-term care population. A large,

adequately powered, randomised trial, or a large, adequately powered, cluster randomised trial should be conducted in people in long-term care to compare a multicomponent intervention with usual care. The multicomponent intervention should include assessment by a trained and competent healthcare professional, who would recommend actions tailored to the person's needs. The intervention should include the recommended interventions to prevent delirium, particularly reorientation, medication review, hydration and sleep hygiene. The primary outcome should be the incidence of delirium, measured at least daily using a validated diagnostic tool. The severity and duration of delirium should also be recorded using a validated tool, together with the consequences of delirium, including admission to hospital.

#### **4.4 *Delirium in long-term care***

How common is delirium and what are its adverse outcomes in people in long-term care?

##### **Why this is important**

Although there is evidence for adverse outcomes consequent to delirium in hospital, there is very little evidence from long-term care. It is important to determine whether people in long-term care, who already have a high risk of death, dementia and other adverse outcomes, have a further increased risk of these outcomes if they develop delirium. The risk of hospital admission as a consequence of delirium is also unknown. A large cohort study should be conducted in people in long-term care to determine:

- the prevalence of delirium in this setting, **and**
- if the presence of delirium is a prognostic factor for death, dementia, admission to hospital, falls and other adverse outcomes.

The multivariate analysis conducted in this study should take into consideration the potential significant risk factors and confounding factors identified in the guideline. Such a study would also inform cost-effectiveness analyses for the prevention and treatment of delirium.

## **4.5 Education programme**

Does a staff education programme (compared with an educational leaflet or usual care) reduce the incidence of delirium and improve the recognition and recording of delirium in people in hospital?

### **Why this is important**

There is some evidence from multicomponent prevention studies to suggest that an education programme for healthcare professionals who care for people at risk of delirium reduces the incidence of delirium. However, the quality of this evidence is poor. There is a need to determine whether education has an important preventive effect on the incidence of delirium. There is also a need to find out if an educational programme increases awareness of delirium, so that delirium is recorded accurately, which is not the case in the UK at present. A cluster randomised trial should be carried out, with whole hospitals randomised to the educational interventions (thereby reducing the trial contamination effects of staff vicariously picking up education from colleagues randomised to the education programme arm). The primary outcomes (incidence of delirium and recording of delirium in the person's healthcare record) should be measured at a minimum of three timepoints before and after the intervention.

## **5 Other versions of this guideline**

### **5.1 Full guideline**

The full guideline, 'Delirium: diagnosis, prevention and management' contains details of the methods and evidence used to develop the guideline. It is published by the NCGC, and is available from [www.ncgc.ac.uk](http://www.ncgc.ac.uk) and our website ([www.nice.org.uk/guidance/CG103](http://www.nice.org.uk/guidance/CG103)).

### **5.2 Quick reference guide**

A quick reference guide for healthcare professionals is available from [www.nice.org.uk/guidance/CG103/QuickRefGuide](http://www.nice.org.uk/guidance/CG103/QuickRefGuide)

For printed copies, phone NICE publications on 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) (quote reference number N2224).

### **5.3 'Understanding NICE guidance'**

A summary for patients and carers ('Understanding NICE guidance') is available from [www.nice.org.uk/guidance/CG103/PublicInfo](http://www.nice.org.uk/guidance/CG103/PublicInfo)

For printed copies, phone NICE publications on 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) (quote reference number N2225).

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about delirium.

## **6 Related NICE guidance**

### **Published**

- Alcohol use disorders. NICE clinical guideline 100 (2010). Available from [www.nice.org.uk/guidance/CG100](http://www.nice.org.uk/guidance/CG100)
- Donepezil, galantamine, rivastigmine (review) and memantine for the treatment of Alzheimer's disease (amended). NICE technology appraisal 111 (2009). Available from [www.nice.org.uk/guidance/TA111](http://www.nice.org.uk/guidance/TA111)
- Schizophrenia. NICE clinical guideline 82 (2009). Available from [www.nice.org.uk/guidance/CG82](http://www.nice.org.uk/guidance/CG82)
- Surgical site infection. NICE clinical guideline 74 (2008). Available from [www.nice.org.uk/guidance/CG74](http://www.nice.org.uk/guidance/CG74)
- Drug misuse. NICE clinical guideline 52 (2007). Available from [www.nice.org.uk/guidance/CG52](http://www.nice.org.uk/guidance/CG52)
- Acutely ill patients in hospital. NICE clinical guideline 50 (2007). Available from [www.nice.org.uk/guidance/CG50](http://www.nice.org.uk/guidance/CG50)
- Dementia. NICE clinical guideline 42 (2006). Available from [www.nice.org.uk/guidance/CG42](http://www.nice.org.uk/guidance/CG42)
- Parkinson's disease. NICE clinical guideline 35 (2006). Available from [www.nice.org.uk/guidance/CG35](http://www.nice.org.uk/guidance/CG35)
- Nutrition support in adults. NICE clinical guideline 32 (2006). Available from [www.nice.org.uk/guidance/CG32](http://www.nice.org.uk/guidance/CG32)

- Violence. NICE clinical guideline 25 (2005). Available from [www.nice.org.uk/guidance/CG25](http://www.nice.org.uk/guidance/CG25)
- Falls. NICE clinical guideline 21 (2004). Available from [www.nice.org.uk/guidance/CG21](http://www.nice.org.uk/guidance/CG21)
- Infection control. NICE clinical guideline 2 (2003). Available from [www.nice.org.uk/guidance/CG2](http://www.nice.org.uk/guidance/CG2)

### **Under development**

NICE is developing the following guidance (details available from [www.nice.org.uk](http://www.nice.org.uk)):

- Alcohol dependence and harmful alcohol use. NICE clinical guideline. Publication expected February 2011.

## **7 Updating the guideline**

NICE clinical guidelines are updated so that recommendations take into account important new information. New evidence is checked 3 years after publication, and healthcare professionals and patients are asked for their views; we use this information to decide whether all or part of a guideline needs updating. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations. Please see our website for information about updating the guideline.

## **Appendix A: The Guideline Development Group and NICE project team**

### ***Guideline Development Group***

#### **David Anderson**

Consultant in Old Age Psychiatry, Mersey Care NHS Trust

#### **Andrew Clegg (non-voting member)**

Specialist Registrar in Geriatric and General Medicine, Bradford Royal Infirmary, West Yorkshire

#### **Melanie Gager**

Sister in Critical Care Follow Up, Royal Berkshire Hospital, Reading

#### **Jim George**

Consultant Physician, Cumberland Infirmary, Carlisle

#### **Wendy Harvey (nee Tomlinson)**

Homes Manager, MHA Care Group

#### **Jane Healy**

Senior Clinical Practice Facilitator, University College London Hospitals NHS Foundation Trust, London

#### **Anne Hicks**

Consultant in Emergency Medicine, Plymouth Hospitals NHS Trust

#### **John Holmes**

Senior Lecturer in Old Age Liaison Psychiatry, Institute of Health Sciences, University of Leeds

#### **Emma Ouldred**

Dementia Nurse Specialist, King's College Hospital NHS Foundation Trust, London

#### **Najma Siddiqi**

Consultant Psychiatrist, Bradford District Care Trust, West Yorkshire

**Beverley Tabernacle**

Nurse Consultant, Salford Royal Foundation Trust (until January 2009)

**Gordon Sturme**

Patient and carer member, Critpal (Intensive Care Society) (until August 2008)

**Rachel White**

Patient and carer member

**Matt Wiltshire**

Patient and carer member (from November 2008)

**John Young (Chair)**

Honorary Consultant Geriatrician, Bradford Teaching Hospitals Foundation  
NHS Trust

***NCGC project team***

**Anayo Akunne**

Health Economist

**Ian Bullock (voting member)**

Chief Operating Officer

**Sarah Davis (voting member)**

Senior Health Economist (until December 2009)

**Bernard Higgins**

Clinical Director

**Paul Miller**

Senior Information Specialist

**Lakshmi Murthy**

Research Fellow

**Rachel O'Mahony**

Senior Research Fellow; Project Manager (August 2009–April 2010)

**Jill Parnham**

Operations Director

**Silvia Rabar**

Project Manager (from April 2010)

**Fulvia Ronchi**

Senior Project Manager (April–August 2009)

**Maggie Westby (voting member)**

Clinical Effectiveness Lead

***NICE project team***

**Laura Bruton**

Guidelines Coordinator (until May 2010)

**Christine Carson**

Associate Director (until January 2010)

**Emilene Coventry**

Senior Medical Editor

**Sarah Dunsdon**

Guideline Commissioning Manager (from January 2010)

**Andrew Gyton**

Guidelines Coordinator (from May 2010)

**Lynne Kincaid**

Medical Editor

**Sue Latchem**

Guideline Commissioning Manager (until January 2010)

**Judith Richardson**

Associate Director (from January 2010)

**Christine Sealey**

Guideline Commissioning Manager (until 8 September 2008)

**Judith Thornton**

Technical Lead

## **Appendix B: The Guideline Review Panel**

The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

### **Graham Archard**

GP, Dorset

### **Catherine Arkley**

Lay Member

### **Mike Drummond (Chair)**

Director, Centre for Health Economics, University of York

### **David Gillen**

Medical Director, Wyeth Pharmaceutical

### **Ruth Stephenson**

Consultant Anaesthetist, Department of Anaesthetics, Aberdeen Royal Infirmary

## **Appendix C: The algorithms**

There is a care pathway for delirium in the quick reference guide, available at [www.nice.org.uk/CG103/QuickRefGuide](http://www.nice.org.uk/CG103/QuickRefGuide)