‘Anticipatory medication’ guidance for the last days of life for frail older people being care for in care homes who do not have Specialist Palliative Care needs

Purpose of guidance:
The purpose of this guidance is to provide advice for the use of ‘anticipatory medication’ for frail older people in care homes in the last days of life. The term ‘anticipatory medication’ refers to medication which can be administered when the resident can no longer swallow and has been ordered into the home/care home to ensure that there is no delay in responding to a symptom should it occur during the last hours/days of life.

The guidance looks at the use of medication to manage three common symptoms which may affect frail elderly in their last days of life – terminal restlessness, pain and excessive secretions.

Residents for whom this ‘anticipatory medication’ guidance applies:
The guidance applies to frail older people living in care homes. ‘Frail older people’ are those:
- aged over 75 years with the presence of multiple chronic diseases
- having advanced, progressive, incurable illness and so considerable health and social needs

Target audience:
The target audience for this guidance are:
- GPs
- Care home managers and nurses,
- District nurses, and
- Specialist Palliative Care teams.

Background:
Dying in frail older people requiring 24 hour care is different from dying in mid-life from cancer. This population of frail older people often have multiple co-morbidities which may be complicated by varying degrees of dementia/cognitive impairment. A recent survey of all residents living in BUPA’s UK care homes in 2009 reported the most commonly occurring disorders were dementia (43.6%), stroke (20.2%), heart disease (20.6%) and arthritis (18.3%). Although this data is from one care home provider, it does give an indication that the end-of-life care needs of those dying in care homes may differ from those individuals dying of cancer.

Dying itself is not thought to be painful. However, many frail older people have symptoms that require assessment and management if they are to be cared for in a dignified and compassionate manner. Symptom presence and severity in this population are often caused by multiple factors which interact, rather than a single factor but often require significantly less parenteral medication. It should be noted that despite the often dwindling trajectory of frail older people, death can also be ‘relatively’ unexpected.
Methodology:
This guidance was written following a literature review. Studies accepted included those reporting on anticipatory medication use for the last days of life for older/frail people. The studies selected for inclusion were identified by an electronic search on the databases: MEDLINE, CINHAI, EMBASE and the COCHRANE Library on 20th December 2012. The following search terms were used: older people, elderly, aging, last days of life, end of life, dying, terminal care, terminally ill, palliative care, palliative therapy, drugs, medications, pharmacological, anticipatory medication, crisis medication, nursing homes, long term care, long term facilities, homes for the aged, health services for the aged, residential care, elderly care, pharmacokinetics, pharmacological, pharmaceutical. Selected articles were examined and relevant citations obtained. Additional reference books (Oxford Textbook of Palliative Nursing; Dementia: from advanced disease to bereavement; The Palliative Care Formulary) provided information on the specific medications recommended within the literature review.

Evidence:
This guidance looked at the management of terminal restlessness, pain and excessive secretions in the last days of life. The recommendation for older frail people is to ‘start low and go slow’. These symptoms are taken in turn:

Terminal restlessness:
Presentation
This can occur in the last hours/days of life and may present as fidgeting, tossing and turning, thrashing or agitation, involuntary muscle jerks; yelling or moaning.

Treatment
1. Rule out and treat any reversible causes such as a full bladder, constipation, dyspnoea, discomfort or pain or known existential causes.
2. The treatment for terminal restlessness is then sedation. See Table One.

<table>
<thead>
<tr>
<th>Anticipatory Medication</th>
<th>Supporting Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol</td>
<td>• For hyperactive terminal restlessness haloperidol is recommended(^9)</td>
</tr>
<tr>
<td></td>
<td>• Avoid completely in residents with Dementia Lewy Body and/or Parkinson’s (^14)</td>
</tr>
<tr>
<td></td>
<td>• Dose 0.5mgs subcutaneously (^14)</td>
</tr>
<tr>
<td>Midazolam</td>
<td>• Midazolam is sedating, anxiolytic and anticonvulsant (^9)</td>
</tr>
<tr>
<td></td>
<td>• Midazolam 2.5-5mg s/c (^14) is suitable for short-term sedation (^9)</td>
</tr>
<tr>
<td>Diazepam</td>
<td>• Diazepam is sedating, anxiolytic and anticonvulsant (^9)</td>
</tr>
<tr>
<td></td>
<td>• In an agitated moribund patient rectal solution diazepam (5-10mgs) may be useful (^10) However, this recommendation is related mainly to cancer patients and not frail older people. Therefore in this population a lower dose may be adequate.</td>
</tr>
</tbody>
</table>

Pain:
Presentation
If a resident is able to speak then they may be able to express their pain. However it is more likely that the resident will be unconscious or semi-conscious. It is important to consider potential causes of pain and observe the residents behaviour and body language (e.g. frowning, grimace, drawn face, tense, agitated, noisy/fast breathing).
It is important to remember that people, especially frail elderly can have more than one type of pain.

_Treatment_

The analgesic and the dose will depend upon the residents clinical problem and previous analgesic and opioid use (see Table Two).

Physiological changes in the older person can mean that drugs can be more potent and have a longer duration of action than sometimes expected. It is in opioid naïve residents that the lowest dose is recommended.

Remember too that pain is not always physical but can have emotional, spiritual and social aspects and these should be addressed where possible.

_Table Two: Anticipatory medication for pain and supporting evidence_

<table>
<thead>
<tr>
<th>Anticipatory medication</th>
<th>Supporting Evidence</th>
</tr>
</thead>
</table>
| Paracetamol suppositories               | • 0.5-1g (max 4g/24 hrs). For mild pain, non-opioid. It is a centrally acting analgesic and has antipyretic properties \cite{13}  
• Can be used even if patient taking opioid |
| Morphine Sulphate                       | • 1-10mg sc prn or 1/6th of 24hr dose this is starting rule of thumb to help one titrate prn analgesia to response \cite{14}  
• Morphine is choice opioid whether pain is non-malignant or cancer \cite{11}  
• +/- paracetamol as an adjuvant \cite{13} |
| Transdermal patches (e.g. buprenorphine/fentanyl) | • Continue with patches although additional prn medication may be required.  
• Note that it has slow onset of action and can take 12-24 hours after initial application before a steady state is reached \cite{11,13,14} |

_Secretions:_

**Presentation**

This is where secretions have gathered in the upper airways and oropharynx and noisy, moist, ‘bubbly’ breathing is heard \cite{13,14}. It is not thought to be distressing for the patient but can be unsettling for relatives to listen to \cite{13}.

_Treatment_

Treat early as it is easier to stop secretions from forming than to remove those that have developed (see Table Three).

_Table Three: Anticipatory medication for secretions and supporting evidence_

<table>
<thead>
<tr>
<th>Anticipatory medication</th>
<th>Supportive evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycopyrronium</td>
<td>200 mcg subcutaneously prn. Does not cross blood brain barrier so less sedative \cite{13,14}</td>
</tr>
<tr>
<td>Hyoscine butylbromide (Buscopan)</td>
<td>10-20mg sc prn. Less sedative than hyoscine hydrobromide, does not cross blood brain barrier \cite{13,14}</td>
</tr>
</tbody>
</table>
Repositioning may be effective in some cases especially when the ‘rattly’ chest is the result of a terminal pneumonia. Suction is not usually effective and can be distressing for the person. Regular mouthcare should be carried out as anticholinergics dry the mouth. It should be noted that some residents may still continue with ‘rattly’ breathing even with the optimal use of anticholinergic medication.

**Development process:**
The guidance was initially developed following a baseline review of medication provided to older people in nursing care homes in the last month of life. This concluded ‘that most syringe drivers were in place for less than 1.5 days. This means the symptom control needs of older people in the last days of life may be more appropriately managed through the use of bolus subcutaneous medication or rectal suppositories’\(^\text{15}\). The initial guidance was developed by those taking part in the baseline audit: JK; JH; nurse managers from participating care homes; a local Macmillan GP advisor; alongside the pharmacist and medical team at St Christopher’s Hospice, London.

While undertaking the re-working of this guideline, the dose equivalents for strong opioids was again raised. The EAPC produced evidence-based recommendations\(^\text{16}\) which suggests traditional ratios used at St Christopher’s may not be accurate. As a result, a review of the literature available from the main sources of palliative care medicines information\(^\text{10, 17}\) was undertaken; clearly differences of opinion remain even within this literature. The dose equivalent chart for strong opioids has been used in clinical practice at St Christopher’s for the past ten years with no adverse outcomes. All ratios on the chart are estimates and to be used only as a guide. It is also recommended that, in prescribing for frail, older people, where there is a range, the lowest dose is used; the individual patient’s medical condition must be taken into consideration every time there is a drug change.

**Plan for review:**
The guidance was updated in January 2013 and so review is planned in January 2015.

**Conflict of interest:**
None declared.

**Funding:**
No funding was sought to support the development of this guidance.

**Implementation:**
This guidance was initially developed in 2010 by a multi-professional group of specialists working in care homes and specialist palliative care. They were then used throughout 71 nursing care homes in the St Christopher’s locality who had undertaken the Gold Standards Framework in Care Homes Programme. They have more recently been used residential care home taking part in the Steps to Success Programme [http://www.stchristophers.org.uk/care-homes](http://www.stchristophers.org.uk/care-homes).

This updated guidance taking into consideration where possible the advice supported by current literature should be used alongside the documentation for the care in the last days of
life (i.e. the integrated care plan for the last days of life for residents in care homes; the Minimum Care Protocol; or the Liverpool Care Pathway).

The guidance does not address every symptom. If symptom control is problematic then further palliative care advice should be sought.

The guidance was updated in January 2013 by:

Jo Hockley (nurse consultant)\(^1\); Julie Kinley (clinical research nurse)\(^1\); Louisa Stone (care home facilitator in EoLC development)\(^1\); Dr Nigel Sykes (consultant)\(^2\); Louise Gibbs (consultant)\(^3\); Margaret Gibbs (pharmacist)\(^2\); Dr Victor Pace (consultant)\(^2\); Dr Emma Hall (consultant)\(^3\).

\(^1\) Care Home Project & Research Team, St Christopher’s Hospice, London SE26 6DZ
\(^2\) St Christopher’s Hospice, London SE26 6DZ

References:

1. Hockley J., Watson J., and Dewar B (2004) *Bridges Initiative Project Phase 2: Developing quality end of life care in eight independent nursing homes through the implementation of the adapted Liverpool Care Pathway for the last days of life.* St Columba’s Hospice, Edinburgh.