Self-Harm:

short-term physical and psychological management and secondary prevention of intentional self-harm in primary and secondary care

National Clinical Practice Guideline Number ___

National Collaborating Centre for Mental Health Commissioned by the National Institute for Clinical Excellence

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GLOSSARY
[glossary to be included in 2nd draft]
1 Introduction

This guideline has been developed to advise on the short-term physical and psychological management and secondary prevention of intentional self-harm in primary and secondary care. The guideline recommendations have been developed by a multidisciplinary group of health care professionals, patients and their representatives, and researchers after careful consideration of the best available evidence. It is intended that the guideline will be useful to clinicians and service commissioners in providing and planning high quality care for those people who self-harm while also emphasising the importance of the experience of care for service users and carers.

1.1 National guidelines

1.1.1 What are clinical practice guidelines?
Clinical practice guidelines are ‘systematically developed statements that assist clinicians and patients in making decisions about appropriate treatment for specific conditions’ (Department of Health, 1996). They are derived from the best available research evidence, using predetermined and systematic methods to identify and evaluate all the evidence relating to the specific condition in question. Where evidence is lacking, the guidelines will incorporate statements and recommendations based upon the consensus statements developed by the guideline development group.

Clinical guidelines are intended to improve the process and outcomes of health care in a number of different ways. Clinical guidelines can:

- provide up-to-date evidence-based recommendations for the management of conditions and disorders by healthcare professionals
- be used as the basis to set standards to assess the practice of healthcare professionals
- form the basis for education and training of healthcare professionals
- assist patients and carers in making informed decisions about their treatment and care
- improve communication between healthcare professionals, patients and carers
- help identify priority areas for further research.
1.1.2 Uses and limitations of clinical guidelines
Guidelines are not a substitute for professional knowledge and clinical judgment. Guidelines can be limited in their usefulness and applicability by a number of different factors: the availability of high quality research evidence, the quality of the methodology used in the development of the guideline, the generalisability of research findings and the uniqueness of individual patients.

Although the quality of research in self-harm is variable, the methodology used here reflects current international understanding on the appropriate practice for guideline development (AGREE: Appraisal of Guidelines for Research and Evaluation Instrument; www.agreecollaboration.org), ensuring the collection and selection of the best research evidence available, and the systematic generation of treatment recommendations applicable to the majority of patients and situations. However, there will always be some patients and situations for which clinical guideline recommendations are not readily applicable. This guideline does not, therefore, override the individual responsibility of health professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or carer.

In addition to the clinical evidence, cost-effectiveness information, where available, is taken into account in the generation of statements and recommendations of the clinical guidelines. While national guidelines are concerned with clinical and cost effectiveness, issues of affordability and implementation costs are to be determined by the NHS.

In using guidelines, it is important to remember that the absence of empirical evidence for the effectiveness of a particular intervention is not the same as evidence for ineffectiveness. In addition, of particular relevance in mental health, evidence-based treatments are often delivered within the context of an overall treatment programme including a range of activities, the purpose of which may be to help engage the patient, and provide an appropriate context for the delivery of specific interventions. It is important to maintain and enhance the service context in which these interventions are delivered, otherwise the specific benefits of effective interventions will be lost. Indeed, the importance of organising care, so as to support and encourage a good therapeutic relationship, is at times more important than the specific treatments offered.

1.1.3 Why develop national guidelines?
The National Institute for Clinical Excellence (NICE) was established as a Special Health Authority for England and Wales in 1999, with a remit to provide a single source of authoritative and reliable guidance for patients, professionals and the public. NICE guidance aims to improve standards of care, to diminish unacceptable variations in the provision and quality of care
across the NHS and to ensure that the health service is patient-centred. All guidance is developed in a transparent and collaborative manner using the best available evidence and involving all relevant stakeholders.

NICE generates guidance in a number of different ways, two of which are relevant here. First, national guidance is produced by the Technology Appraisal Committee to give robust advice about a particular treatment, intervention, procedure or other health technology. Second, NICE commissions the production of national clinical practice guidelines focused upon the overall treatment and management of a specific condition. To enable this latter development, NICE established seven National Collaborating Centres in conjunction with a range of professional organisations involved in healthcare.

1.1.4 The National Collaborating Centre for Mental Health
This guideline has been commissioned by NICE and developed within the National Collaborating Centre for Mental Health (NCCMH). The NCCMH is a collaboration of the professional organisations involved in the field of mental health, national service-user and carer organisations, a number of academic institutions and NICE. The NCCMH is funded by NICE and led by a partnership between the Royal College of Psychiatrists’ research unit (College Research Unit – CRU) and the British Psychological Society’s equivalent unit (Centre for Outcomes Research and Effectiveness – CORE). Members of the NCCMH reference group come from the following organisations:

- Royal College of Psychiatrists (RCPsych)
- British Psychological Society (BPS)
- Royal College of Nursing (RCN)
- National Institute for Social Work (NISW)
- College of Occupational Therapists (COT), now replaced by the Clinical Effectiveness Forum for the Allied Health Professions (CEFAHP)
- Royal College of General Practitioners (RCGP)
- Royal Pharmaceutical Society (RPS)
- Rethink Severe Mental Illness
- Manic Depression Fellowship (MDF)
The NCCMH reference group provide advice on a full range of issues relating to the development of guidelines, including the membership of experts, professionals, patients and carers within guideline development groups.

1.1.5 From national guidelines to local protocols
Once a national guideline has been published and disseminated, local healthcare groups will be expected to produce a plan and identify resources for implementation, along with appropriate timetables. Subsequently, a multidisciplinary group involving commissioners of health care, primary care and specialist mental health professionals, patients and carers should undertake the translation of the implementation plan into local protocols. The nature and pace of the local plan will reflect local health care needs and the nature of existing services; full implementation may take a considerable time, especially where substantial training needs are identified.

1.1.6 Auditing the implementation of guidelines
This guideline identifies key areas of clinical practice and service delivery for local and national audit. Although the generation of audit standards is an important and necessary step in the implementation of this guidance, a more broadly based implementation strategy will be developed. Nevertheless, it should be noted that the Commission for Health Care, Audit and Improvement (CHAI) will monitor the extent to which Primary Care Trusts (PCTs), trusts responsible for mental health and social care and Health Authorities have implemented these guidelines.

1.2 The national self-harm guideline

1.2.1 Who has developed this guideline?
The ‘Guideline Development Group’ (GDG) was convened by the NCCMH based upon advice from the Centre’s reference group representatives, and supported by funding from NICE. The GDG consisted of service users and carers, academic experts in psychiatry and toxicology, and professionals from psychiatry, emergency medicine, general practice, social work services, the ambulance service and the Samaritans.

Staff from the NCCMH provided leadership and support throughout the process of guideline development, undertaking systematic searches,
information retrieval, appraisal and systematic review of the evidence. Members of the GDG received training in the process of guideline development from the Centre for Evidence-Based Mental Health (CEBMH), and the National Guidelines and Audit Patient Involvement Unit, which has been established by NICE. The National Guidelines Support and Research Unit, also established by NICE, provided advice and assistance regarding all aspects of the guideline development process.

All members of the Group made formal declarations of interest at the outset, updated at every GDG meeting. GDG members met a total of twenty-one times throughout the process of guideline development. For ease of evidence identification and analysis, members of the GDG formed sub-groups, or ‘Topic Groups”, covering identifiable treatment approaches. Topic Groups were led by a national expert in the relevant field and supported by the NCCMH technical team, with additional expert advice from special advisors where necessary. Topic Groups oversaw the production and synthesis of research evidence before presentation to the wider GDG. All statements and recommendations in this guideline have been generated and agreed by the whole GDG.

1.2.2 For whom is this guideline intended?

This guideline will be of relevance to all people who have self-harmed aged 8 years of age and over. This guideline will not explicitly provide guidance on the management or treatment of people who have self-harmed in the context of a separate physical or other primary mental disorder. These may also be dealt with in a future guideline.

In sum, this guideline is intended for use by:

- Individuals who have self-harmed aged 8 years and over and their families/carers
- Professional groups who share in the treatment and care for people who have self-harmed, including psychiatrists, clinical psychologists, mental health nurses, community psychiatric nurses, social workers, practice nurses, occupational therapists, pharmacists, general practitioners and others
- Professionals in other health and non-health sectors who may have direct contact with or are involved in the provision of health and other public services for those who have self-harmed. These may include A&E staff, paramedical staff, prison doctors, the police and professionals who work in the criminal justice and education sectors
• Those with responsibility for planning services for people who have self-harmed, and their carers, including directors of public health, NHS trust managers and managers in PCTs.

1.2.3 Specific aims of this guideline
The guideline makes recommendations and good practice points for medical and surgical treatments and the use of psychosocial and service level interventions in combination with medical and surgical treatments in the three phases of care, specifically it aims to:

• Evaluate the role of specific medical and surgical interventions in the first 48 hours of care following an episode of self-harm
• Evaluate the role of risk assessment for people who have self-harmed
• Evaluate the role of specific psychological and pharmacological interventions following an episode of self-harm
• Evaluate the role of specific service delivery systems and service-level interventions in the treatment and care of people who have self-harmed
• Integrate the above to provide best practice advice on the care of individuals who have self-harmed through the first 48 hours of care and referral to mental health services.
2 Introduction to self-harm

2.1 What is self-harm and what does the guideline cover?

The guideline has adopted the definition that self-harm is “intentional self-poisoning or injury, irrespective of the apparent purpose of the act”. This is a shorter, and broader definition, to that adopted by the World Health Organisation (Box 1). The guideline focuses on those acts of self-harm that are an expression of personal distress and where the person directly intends to injure him/herself. The scope has been limited in this way because the term self-harm is a broad one and could be applied to the actions of many people at some time in their lives. Many behaviours that are culturally acceptable can result in self-inflicted physical or psychological damage; such as smoking, recreational drug use, excessive alcohol consumption, over-eating or dieting. Also, self-harm can occur as part of religious practice, as a form of political or social protest or as an act of “body enhancement” (Babiker & Arnold, 1997; Walsh & Rosen, 1988).

Box 1

The World Health Organisation Definition of Parasuicide (WHO, 1993)

“An act with non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognised therapeutic dosage, and which is aimed at realising changes which the subject desired via the actual or expected physical consequences”

Even when these types of self-harm are excluded, the guideline must address the needs of people whose self-harm varies greatly in its nature and meaning.

Box 2 gives three vignettes that, whilst by no means encompassing all types of circumstance in which self-harm occurs, illustrate the extent of this diversity. Also, the outcome for the people described by the vignettes would be very different in the absence of an intervention by care services.
Box 2

Three Vignettes to Illustrate the Diversity of Self-harm that Falls within the Remit of the Guideline

1. A 55 year old bank manager, married for 30 years and a mother of three children. She has had no recent major adverse life events. At age 30 she suffered a severe depressive illness that responded to ECT. She had been well and on no treatment for 23 years until she became depressed again “out of the blue”. She became highly agitated and developed the depressive delusion that she was evil and would be responsible for the death of her children. To prevent this she drove to a secluded spot and took 100 tablets of her antidepressant.

2. A 19 year old student who has no previous history of mental health problems or of self-harm. Towards the end of a party the young man, who had drunk 8 cans of lager, had an argument with his partner, went into the bathroom and swallowed a handful of aspirin tablets. He almost immediately regretted his action and told a friend who phoned for an ambulance which took him to the local Accident and Emergency Department.

3. A 22 year old unemployed man who was raised in a series of children’s homes. He was subjected to repeated abuse as a child and has a history of substance misuse. He has cut his arms since the age of 14 at an average frequency of about once every three weeks. This gives him relief from intense feelings of emptiness and despair. He presents to A&E for the third time that month with superficial cuts to his forearm. He does not describe a persisting low mood.

NICE guidelines are principally for those who work for or use NHS services. The emphasis is therefore on the care of those people whose act of self-harm brings them to the attention of statutory services. Although this is perhaps only a minority of people who self-harm, they are an important group both because they are statistically at much higher risk of suicide than the rest of the population and because they often report that services fail to meet their needs. The guideline is limited to how services should respond in the 48 hours after an episode of self-harm; it does not consider in detail the longer-term care of people who self-harm, including those who self-harm repeatedly. Finally, the guideline does not address the needs of people who have thoughts of self-harm or of suicide but do not act on these.

2.2 A Note about terminology

The language of health care is always evolving. Also, health care workers from different professional backgrounds sometimes use different terms to
describe the same concept. Furthermore, some terms are unacceptable to some service users. These differences reflect differing perspectives and can also sometimes exacerbate divisions. The guideline development group had many discussions about terminology. It reached agreement on some issues; for example not to use the words "deliberate" or "intentional" to prefix self-harm and not to use the word "commit" in relation to suicide.

lists some of the terms that are commonly used to describe the behaviour that is the subject of this guideline.

**Box 3**

<table>
<thead>
<tr>
<th>Common Terms used to describe self-harm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYNONYMS</strong></td>
</tr>
<tr>
<td>Self-harm</td>
</tr>
<tr>
<td>Deliberate self-harm</td>
</tr>
<tr>
<td>Intentional self-harm</td>
</tr>
<tr>
<td>Parasuicide</td>
</tr>
<tr>
<td>Attempted suicide</td>
</tr>
<tr>
<td>Non-fatal suicidal behaviour</td>
</tr>
<tr>
<td>Self-inflicted violence</td>
</tr>
<tr>
<td><strong>SUB-TYPES</strong></td>
</tr>
<tr>
<td>Self-poisoning</td>
</tr>
<tr>
<td>Self-injury</td>
</tr>
<tr>
<td>Self-mutilation</td>
</tr>
</tbody>
</table>

2.3 Why do people self-harm?

As vignette 1 shows, an individual episode of self-harm might be an attempt to end life. However, many acts of self-harm are not directly connected to suicidal intent. They may be an attempt to communicate with, to influence or to secure help or care from others or a way of obtaining relief from an unpleasant and otherwise overwhelming situation or emotional state (Hjelmeland et al, 2002). Paradoxically, the purpose of some acts of self-harm is to preserve life (as illustrated by vignette 3); professionals sometimes find this a difficult concept to understand.

One particular intention or motive might predominate or all might co-exist. This means that a person who self-harms repeatedly, might not always do so for the same reason each time, or by the same method (Horrocks et al., 2003). Thus assumptions about intent should not be made on the basis of a previous pattern of self-harm; each act must be assessed separately to determine the motivation behind it. Failure to do this can result in the meaning of the act being misunderstood and in an interpretation that the service user finds judgmental or dismissive. This will inevitably lead to a breakdown in the therapeutic relationship, as well as making it less likely that appropriate help will be offered at times when a person is at high risk of suicide.

Consistent with these differences in intention and motive, people who self-harm might have very different expectations about how health services should respond and what constitutes a good outcome. In particular, people who harm themselves as a way of relieving distress might view self-harm as an important coping strategy, rather than a problem, and therefore not wish to engage with an intervention whose sole apparent aim is to reduce the likelihood of future acts of self-harm.

Research into motivation and related risk factors comes from two main sources: either by asking service users at interview about their motivation to self-harm (usually recorded on checklists); or, by self-report. The interview and checklist approach is limited by the fact that the precise reason for a person to self-harm tends to be a very individual matter, and the same person may self-harm on different occasions for different reasons. The gain in statistical power using standard questionnaires may well be off-set by the loss in specificity. The result is that standard scales developed to measure motivation to die, such as the Suicide Intent Scale (Beck et al., 1974), are generally regarded to be unreliable (see Chapter 8).

2.4 The means of self-harm

The method of self-harm can be divided into two broad groups; self-poisoning and self-injury. People who self-poison are more likely to seek help than those who self-injure (Hawton et al, 2002; Melzer et al, 2002a). For this
reason, studies that focus on people who attend A&E paint a different picture, about the respective prevalence of these two forms of self-harm, than studies of the general population.

About 80% of people who present to A&E following self-harm will have taken an overdose of prescribed or over-the-counter medication (Horrocks et al., 2003). A small additional percentage will have intentionally taken a dangerously large amount of an illicit drug or have poisoned themselves with some other substance. The pattern of the type of drug taken in overdose has changed in recent years; largely with changes in their availability.

Recent studies of the method of suicide suggest that people who survive a medically serious suicide attempt may well have a poorer outcome. For example, in a prospective study of 302 people who had made a serious attempt on their life, 1 in 11 had died within 5 years, with nearly 60% of deaths being by suicide, and a greater than expected number dying by vehicular accident (Beautrais, 2003). And in a Japanese study, those who used more violent means to self-harm were predominantly male (68%) compared to those who took overdoses who were more likely to be female (72%) (Murase S et al., 2003).

Box 3 lists those substances most commonly reported to the National Poisons Information Service London Centre as having been taken during acts of self-poisoning in 2001.

Box 5 lists those drugs most frequently taken by people who presented to A&E departments in Leeds and Oxford.

**Box 3**

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>NUMBER OF REPORTS</th>
<th>PERCENTAGE OF TOTAL ENQUIRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All analgesics and anti-inflammatory drugs</td>
<td>26 155</td>
<td>39</td>
</tr>
<tr>
<td>Paracetamol</td>
<td>10 368</td>
<td>15</td>
</tr>
<tr>
<td>Aspirin</td>
<td>2 997</td>
<td>4</td>
</tr>
<tr>
<td>Other analgesics</td>
<td>12 766</td>
<td>19</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>10 433</td>
<td>15</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>6 164</td>
<td>9</td>
</tr>
<tr>
<td>Major tranquillisers</td>
<td>3 873</td>
<td>6</td>
</tr>
<tr>
<td>Hypnotic/sedatives</td>
<td>3 603</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>17 442</td>
<td>26</td>
</tr>
<tr>
<td>Total number of reports</td>
<td>67 684</td>
<td>100</td>
</tr>
</tbody>
</table>
In contrast to those who attend A&E, self-injury is more common than self-poisoning in the population as a whole; perhaps by a ratio of two to one in teenagers (Hawton et al., 2002). Cutting is by far the most common means (Hawton et al., 2002, Horrocks et al., 2003). Less common methods include burning, hanging, stabbing, swallowing objects, insertion, shooting and jumping from heights or in front of vehicles.

Box 4 Poisons implicated in self-poisoning episodes. The figures for each drug are percentages, rounded to the nearest whole number

<table>
<thead>
<tr>
<th>Study</th>
<th>Grootenhus</th>
<th>Clombie</th>
<th>Bialas</th>
<th>Thomas</th>
<th>Kapur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Oxford</td>
<td>Scotland</td>
<td>S Glamorgan</td>
<td>N E England</td>
<td>Leeds, Manchester, Leicester, Nottingham</td>
</tr>
<tr>
<td>Data type</td>
<td>referrals to one hospital</td>
<td>hospital discharges statistics</td>
<td>admissions to poison treatment centre</td>
<td>attendances at 6 A&amp;E departments</td>
<td>discharges from A&amp;E at 4 teaching hospitals</td>
</tr>
<tr>
<td>Age group</td>
<td>not stated</td>
<td>over 15 years</td>
<td>over 15 years</td>
<td>over 10 years</td>
<td>over 16 years</td>
</tr>
<tr>
<td>Total number of episodes</td>
<td>1179</td>
<td>7108</td>
<td>2307</td>
<td>945</td>
<td>203</td>
</tr>
<tr>
<td>paracetamol</td>
<td>41</td>
<td>43</td>
<td>43</td>
<td>45</td>
<td>25</td>
</tr>
<tr>
<td>aspirin</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>all analgesics</td>
<td>54</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>benzodiazepines</td>
<td>17</td>
<td>24</td>
<td>30</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>antidepressants</td>
<td>15</td>
<td>16</td>
<td>18</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>with alcohol</td>
<td>38</td>
<td>not stated</td>
<td>48</td>
<td>13</td>
<td>not stated</td>
</tr>
</tbody>
</table>
2.5 How common is self-harm?

Because many acts of self-harm do not come to the attention of healthcare services, hospital attendance rates do not reflect the true scale of the problem (Hawton et al., 2002; Melzer et al., 2002b). A national interview survey suggested that, in Great Britain, between 4.6% and 6.6% of people have self-harmed (Melzer et al., 2002a). However, even this might be an under-estimate. In a school survey, 13% of young people aged 15 or 16 reported having self-harmed at some time in their lives and 7% as having done so in the previous year (Hawton et al., 2002).

Overall, women are more likely to self-harm than men. This is most pronounced in adolescence, where girls may be three times more likely to self-harm than boys (Hawton et al., 2002).

Self-harm can occur at any age but is most common in adolescence and young adulthood (Melzer et al., 2002a). In contrast, only about 5% of all episodes of self-harm occur in people over the age of 65 (Dennis et al., 1997; Draper, 1996; Owens et al., 1991).

2.6 Factors that are associated with self-harm

2.6.1 Socioeconomic factors and life events

Self-harm occurs in all sections of the population but is more common among people who are disadvantaged in socio-economic terms and among those who are single or divorced, live alone, are single parents or have a severe lack of social support (Meltzer, 2002a).

Life events are strongly associated with self-harm in two ways. First, there is a strong relationship between the likelihood of self-harm and the number and type of adverse events that a person reports having experienced during the course of their life. These include having suffered victimisation and, in particular, sexual abuse (Hawton et al., 2002; Melzer et al., 2002a). Second, life-events, particularly relationship problems, can precipitate an act of self-harm (Bancroft et al., 1977).

Many people who self-harm have a physical illness at the time and a substantial proportion of these report that this is the factor that precipitated the act (DeLeo, 1999).

2.6.2 The association between self-harm and mental disorder

Most of those who attend an accident and emergency department following an act of self-harm will meet criteria for one or more psychiatric diagnosis at the time they are assessed (Haw et al., 2001). More than two-thirds would be
diagnosed as having depression. However, for many, the depressive symptoms will be a short-lived response to an adverse life event and will have resolved within a few days.

People diagnosed as having certain types of mental disorder are much more likely to self-harm. For this group, the recognition and treatment of these disorders can be an important component of care. In one survey of a sample of the British population, people with current symptoms of a mental disorder were up to twenty times more likely to report having harmed themselves in the past (Melzer et al., 2002a). The association was particularly strong for those diagnosed as having phobic and psychotic disorders. People diagnosed as having schizophrenia are most at risk and about one-half of this group will have harmed themselves at some time.

Certain psychological characteristics are commoner among the group of people who self-harm including impulsivity, poor problem solving and hopelessness. Also, people who self-harm more often have inter-personal difficulties. It is possible to apply diagnostic criteria to these characteristics. This explains why nearly one-half of those who present to A&E meet criteria for having a personality disorder (Haw et al., 2001). However, there are problems with doing this because:

1. There is an unhelpful circularity in that self-harm is considered to be one of the defining features of both borderline and histrionic personality disorder.

2. The diagnostic label tends to divert attention from helping the person to overcome their problems and can even lead to the person being denied help (National Institute for Mental Health in England, 2003).

3. Some people who self-harm consider the term personality disorder to be offensive and to create a stereotype that can lead to damaging stigmatisation by care workers (Babiker & Arnold, 1997; Pembroke, 1994).

2.6.3 The association between self-harm and alcohol and drug use
About one-half of people who attend A&E following self-harm will have consumed alcohol immediately preceding or as part of the self-harm episode (Merrill et al., 1992; Horrocks et al., 2003). For many, this is a factor that complicates immediate management either by impairing judgement and capacity or by adding to the toxic effects of ingested substances. About one-third of those who self-harm will be misusing drugs or alcohol on a regular basis (Haw et al., 2001); the rate is higher in men and is linked to other aspects of social adversity, and higher rates of several risk factors for suicide (Taylor et al., 1999).
2.7 Special groups and issues

2.7.1 Diversity
There is no good evidence to suggest that the incidence of self-harm varies between different ethnic groups, with the exception of higher rates in young Asian women (Bhugra et al., 1999).

2.7.2 Young people
The rate of self-harm is relatively low in early childhood, but increases rapidly with the onset of adolescence. Most acts of self-harm in young people never come to the attention of care services (Hawton et al., 2002) and it is also likely that many parents are unaware of the problem (Melzer, 2002a). Self-harm in young people is often a "marker" for the presence of other problems that might have an important bearing on outcome, such as substance abuse, poor school attendance, low academic achievement and unprotected sex (Kerfoot, 1998; King et al., 2001).

2.7.3 Older People
Although it appears that older people are less likely to self-harm, the consequences are often more serious; it has been estimated that of every five older people who self-harm one will later die by suicide (Lawrence, 2000; McIntosh, 1992). Consistent with this, older people who have self-harmed score highly on scales that measure suicide intent (Merrill and Owens, 1990; Nowers, 1993) and their profile resembles that of older people who die by suicide (Dennis and Lindesay, 1995). In particular, older people who self-harm have high rates of physical ill health, social isolation and depression, (Draper, 1996; Merrill and Owens, 1990; Pierce, 1987). Those with persistent depression are at particular risk of repetition of self-harm or suicide (Hepple and Quinton, 1997).

2.7.4 People with a learning disability
For those working with people with a learning disability, the term self-harm usually refers to ‘self-injurious behaviour’ (SIB), which includes ‘head banging’ and ‘nail biting’. The prevalence of SIB varies between 17% and 24% and is more common in women and girls, those with very low IQ, with communication difficulties and with certain genetic disorders (Deb, 1998; Deb et al., 2001). The management of SIB in people with a learning disability is outside of the scope of this guideline.

There has been little research about the prevalence and management of self-harm, of a type that is the focus of this guideline, by people with a learning disability.
2.7.5 People within the criminal justice system

Self-harm is much commoner among prisoners than among the general population. One-half of female remand prisoners have self-harmed at some time in their lives and more than one-quarter in the previous year. The corresponding figures for men are about half of these. Perhaps as many as 10% of prisoners will self-harm during their term with the likelihood increasing with the length of time in custody. Highest rates are among sentenced female prisoners who have spent two or more years in prison, 23% of whom will have self-harmed during the current term (Melzer et al., 1999).

This high rate is largely explained by the fact that, among the prison population, there are much higher levels of the factors associated with self-harm. For example, between 12 and 21% of prisoners have at least four mental disorders simultaneously (including drug and alcohol dependence, personality disorder, neurotic disorder and psychosis); between 35% and 52% are dependent on opiates, stimulants or both; 20%-30% are severely dependent on alcohol; about one-half of female prisoners report having suffered violence in the home and 10% of men; and 33% of women report previous sexual abuse (Singleton et al., 1998).

Cutting or scratching is the most common method of self-harm in prison. In contrast 90% of suicides in prison are by hanging and self-strangulation, although these account for only one-fifth of self-harm incidents.

The Safer Custody Group of HM Prison Service is gathering increasing evidence about the link between prison conditions and the frequency of self-harm and of suicide (HM Prison Service, 2001).

2.8 The Consequences of self-harm

2.8.1 Repetition and suicide

Between 0.5% and 1% of people who attend A&E following self-harm will die by suicide in the following year. This is between 50 and 100 times greater than the rate of suicide in the general population (Hawton et al., 2003; Owens et al., 2002). Men who self-harm are more than twice as likely to subsequently die by suicide than women and the risk increases greatly with age for both genders (Hawton et al., 2003). It has been estimated that one-quarter of all people who die by suicide would have attended a general hospital following an act of self-harm in the previous year (Owens and House, 1994).

About one in six people, who attend A&E following self-harm, will self-harm again in the following year (Owens et al., 2002); a small minority of people will do so repeatedly. The frequency with which some of the latter group self-harm, means that they are over-represented among those who present at A&E or receive psychiatric care. There is no good evidence to support the widely
voiced opinion that people who harm themselves repeatedly, particularly by cutting, are less likely to die by suicide.

2.8.2 Physical health

Regardless of the person’s intention, self-harm can result in long-lasting ill-health or disability. Paracetamol poisoning is a major cause of acute liver failure requiring liver transplantation. Between 1998 and 2002, 111 liver transplants were carried out, in England and Wales, on people who had taken an overdose of paracetamol. This accounted for 4% of all liver transplants but 23% of all “super-urgent” transplants – those in which the person is expected to die within 72 hours from fulminant liver failure (Rudge, personal communication). Self-cutting can result in permanent damage to tendons and nerves and scarring leading to disfigurement. More violent forms of self-injury often lead to permanent disability and/or hospitalisation.

2.8.3 The economic cost of self-harm

The assessment and treatment of people who self-harm uses a substantial amount of NHS resources. Most of this direct cost is accounted for by the estimated 150,000 attendances at A&E each year and the subsequent medical and psychiatric care (Yeo, 1993). Self-harm resulted in 68,716 hospital admissions in 2001/02. At the same time, over the past 10 years, the average daily number of NHS beds available for mental illness in England has almost halved with 63,000 beds available in the year 1988 to 1989 and only 34,000 available in 2000 to 2001 (Department of Health, 2003). As one of the most common presentations to general hospitals and one which has a strong tendency for recurrence and increased severity, self-harm presents a considerable economic burden to the individual, family, health services, and society as a whole.

Despite the importance to health care authorities, there have been precious few economic evaluations of self-harm that meet rigorous criteria for health economic evaluation (Drummond et al., 1996). The extent of economic burden associated with self-harm is dependent upon both how it is defined and the method of economic evaluation (Drummond et al., 1997). Self-harm is associated with direct and indirect costs. Direct costs are incurred in the course of recognising, caring and treating self-harm patients through primary care, secondary care and social care. Indirect costs include the effects of illness on work attendance and productivity, employer benefits (if any) extended to the individual, malpractice insurance and legal costs, cost of long-term disability and premature mortality, and intangible costs that may extend beyond the individual and her/his immediate family.

It is estimated that up to 20% of overdoses involve ingestion of antidepressants and that the rate of self-poisoning by this modality is increasing (Kapur et al., 1998). In terms of general hospital costs of
antidepressant overdose, based on 240 episodes of self-poisoning over a five-month period in three teaching hospitals and three district hospitals in the UK, the total hospital cost for overdoses of SSRIs versus TCAs was estimated at £17,117 and £78,612 respectively (1999/2000 prices) (Kapur et al., 2001). Per self-poisoning episode, the additional hospital cost of TCA poisoning compared to SSRI poisoning was £461, largely due to the increased number of inpatient days in the intensive care unit, which accounted for a cumulative additional cost of £5.1 million per year in the UK (Kapur et al., 2002).

The indirect costs of self-harm are unknown but, given its prevalence, are likely to be substantial, particularly in terms of days lost from work. However, what we do know is that after cardiovascular disease and cancer, suicide is the next most common cause of life years lost (Gunnell & Frankel, 1994) making self-harm and suicide important public health issues.

It is very difficult to evaluate the cost of treatments for self harm because of the heterogeneous nature of self harm and because there is little evidence about treatment effectiveness (see Chapter 9).

2.9 Contact with services

It is likely that many acts of self-harm do not come to the attention of health care workers and that only a minority result in assessment by specialist mental health services. A person who self-harms may seek advice or care from a variety of sources. These can be conceptualised as being at different levels of the care system. These levels also indicate the potential paths through care that an individual may follow. The picture as to the number of people who present at each level and the extent to which they cross filters is incomplete.

Level 1: family, friends and acquaintances. The three-fold difference in prevalence of self-harm as reported by young people and by their parents (Melzer, 2002a) suggests that many acts of self-harm in the young do not come to the attention of their families.

Level 2: contact with workers not employed by the health service. This might be either face-to-face (for example with a teacher, a police or prison officer, a social worker or a worker from a voluntary sector agency) or with a person staffing a help-line. The latter are frequently used by people who have self-harmed or who believe themselves to be at risk of doing so. In 2001, the Samaritans had more than 3 Million verbal contacts. It estimates that its volunteers explored suicidal feelings with the caller in more than one-quarter of these.

Level 3: primary care health workers and ambulance staff. This includes members of the primary care team, ambulance staff and NHS Direct. About one-half of people who attend A&E following self-harm will have visited their
GP during the previous month and about the same proportion will do so in the two months afterwards (NHS Centre for Reviews and Dissemination, 1998).

People who have self-harmed, their friends and their relatives often turn to the emergency ambulance service for help in resolving incidents of self-harm. Ambulance staff are increasingly better trained and skilled and provide essential care and treatment on scene to prevent further physical deterioration and they also provide a resource to effectively manage the patient’s immediate care pathway, preventing further acts of self-harm and often contribute to psychological first-aid until a place of safety is reached. They often have access to the person’s living environment and gain an insight from family and friends, who often are not present during hospital treatment, on events leading up to the incident of self-harm.

**Level 4: accident and emergency departments.** There are about 150,000 attendances at accident and emergency departments for self-harm each year. This is about 300 attendances per 100,000 population (Hawton et al., 1997; Kapur et al., 1998), although the actual rates vary greatly between different parts of the country (Gunnell, Brookes & Peters, 1996)

**Level 5: Secondary care health services:**

**5a: hospital medical and surgical care.** Self-harm is one of the top five causes of acute medical admission in the UK (Hawton & Fagg, 1992; Gunnell et al., 1996). The proportion of those who attend A&E following self-harm, who are then admitted to a medical or surgical ward varies across different parts of the country, with a usual minimum in reported figures of 40% (Hawton et al., 1997; Horrocks et al., 2003).

**5b: mental health services.** Perhaps one-half of those who present to A&E are assessed by a mental health care worker (Kapur et al., 1998, Horrocks et al. 2003) and between 5 and 10% will be admitted to a psychiatric ward (Horrocks et al., 2003. Once again there is wide variation between centres.

**Level 6: Tertiary services**

The National Poisons Information Service provides a 24-hour telephone information services and maintains TOXBASE, which gives on-line information about the clinical management of poisoning. Both are free of charge to all NHS staff. Toxology units are a further important component of services for people who have self-poisoned. In exceptional cases, people who have poisoned themselves might be transferred to a specialist centre.

At each of these levels there are opportunities for improving the rate of detection of acts of self-harm and for identifying those who would benefit from more specialist help and so should pass through the “filter” to a higher level of care. This particularly relates to interfaces between the levels that
involve services managed by the health service. For example, there is a danger that important information gathered by the ambulance service, about the circumstances of self-harm, is not always received at A&E. Also, as mentioned above, a substantial number of people who present to A&E are discharged or decide to leave before a psychosocial assessment has been carried out.

2.10 **How people who self-harm experience services**

The importance of the experience of assessment, treatment and care for people who have self-harmed should not be underestimated. Many people who self-harm don’t come to the attention of health services, and when they do, many do not return or are lost to follow up. Service users describe contact with health services as often difficult, characterised by ignorance, negative attitudes and sometimes, punitive behaviour by professionals towards people who self-harm. With the risk of death by suicide being considerably higher amongst people who have self-harmed, whatever the expressed intent, and their high rates of mental health problems, and alcohol and substance misuse, it is no longer acceptable for healthcare professionals to ignore, or fail to properly address, the experience of care by service users and carers.

Engaging service users in a therapeutic alliance and promoting joint clinical decision making on the basis of understanding and compassion is essential, especially if further help and treatment are to be offered.

To examine the current experience of service users and carers, this guideline reviewed the service user literature, and arranged two focus groups and interview with service users from two national self-harm service user organisations. The service users were also asked to identify the changes they would want to make in the general approach to treatment currently experienced. To gain confirmation of service user and carer views from a different perspective, an existing review of health professional attitudes to self-harm was also identified and reviewed. The findings and recommendations regarding the experience of care can be found in Chapter 5.

2.11 **Assessment and treatment for people who self-harm**

2.11.1 **Aims and principles of treatment**

As with any other treatment, the overarching aims are to reduce harm and improve survival while minimising the harm that may result from the treatment. In addition, the experience of treatment and care needs to be acceptable to service users and carers. This is especially so for people who self-harm and who may be suffering psychological, social or drug- and alcohol-related problems which need further help after the physical problems have been adequately addressed. It is essential that service users and carers, where appropriate, are engaged effectively by clinicians in an atmosphere of
respect and trust. Without this, further psychosocial assessment and referral for treatment will be difficult if not impossible. Issues of consent and ethics are considered in Chapter 6.

The key aims and objectives in the treatment of self-harm should, therefore, include:

- Rapid assessment of physical and psychological need (triage)
- Effective engagement of service user (and carers where appropriate)
- Effective measures to minimise pain and discomfort
- Timely initiation of treatment irrespective of the cause of self-harm.
- Harm reduction (from injury and treatment; short term and longer term)
- Rapid and supportive psychosocial assessment (including risk-assessment and co-morbidity)
- Prompt and effective psychological and psychiatric treatment where necessary
- Prompt referral for further psychological, social and psychiatric assessment and treatment when necessary
- An integrated and planned approach to the problems of people who self-harm, involving primary and secondary care, mental and physical health care personnel and services.

A flowchart detailing the ‘journey’ a service user may take within services is given in Appendix 2.

2.11.2 Primary care and pre-hospital environment

Primary care professionals, community based mental health workers, ambulance staff and others come into contact with people who have self-harmed with varying frequency. In this context, assessment and referral to the emergency department is the commonest action undertaken. Sometimes, self-injury (but not self-poisoning) will be dealt with in primary care without referral for further physical treatment, usually by sympathetic GPs who have already had contact with the person. In any event, psychosocial assessment should be undertaken by a professional trained to do so at the earliest opportunity. Although little research is seriously lacking, the process and limits of treatment and care in these settings is addressed in Chapter 6.
2.11.3 The emergency department and triage
On entry to the emergency department all patients undergo triage, a utilitarian system using predefined criteria in which the urgency with which a person needs treatment is evaluated using a formal and structured assessment. Triage allows categorising patients according to the need and urgency for treatment and is widely regarded as essential in a busy emergency department, where overcrowding and shortage of resources are common (Brillman et al., 1997). The Triage system most commonly used in the UK is the Manchester Emergency Triage system (Mackway-Jones, 1996), which gives priority to patients largely according to their physical state. The role and tools used for Triage are reviewed in Chapter 7.

Following triage, patients who have self-harmed should receive the requisite treatment for their physical condition, undergo risk and full psychosocial needs assessment and mental state examination, and referral for further treatment and care as necessary.

2.11.4 Medical and surgical treatment of self-harm
A range of medical and surgical interventions is available for the physical treatment of people who have self-harmed, including general and specific treatments for self-poisoning and self-injury. For this guideline, reviews of the evidence base of the following interventions have been undertaken, the findings and recommendations for which can be found in Chapter 7: Triage, paracetamol screening, the general management of ingestion using gut decontamination, the specific treatment of overdose of paracetamol, benzodiazepine, opioid and other substances, and the treatment of superficial wounds. The closure of more complex wounds is beyond the scope of this guideline.

2.11.5 Assessment and psychological and pharmacological treatment of people who self-harm
The psychosocial and risk assessment of people attending emergency departments in the UK has been described as inadequate, characterised by low assessment rates and poor recording of mental health findings (Merril et al., 1992). Given the potentially serious consequences of self-harm with a significant number going on to kill themselves at a later date, effective and reliable means of assessment should be a priority for people who self-harm and present to services. In addition, following assessment, patients may be referred for further pharmacological or psychological treatment in inpatient, outpatient or other setting.

For this guideline we have undertaken a review of risk and needs assessment following self-harm (see Chapter 8). Also, psychological and pharmacological treatments specifically for people who self-harm have been reviewed for this guideline to help guide referral for additional treatment. The outcome of
review can be found in Chapter 9. Drug treatments reviewed include antidepressants and antipsychotics. Psychological treatments reviewed are: problem oriented therapies, dialectical behaviour therapy, inpatient behaviour therapy and insight-oriented therapy, long and short term therapy, home-based family therapy and group therapy. Other psychosocial and service level interventions are also reviewed in Chapter 9.

2.11.6 The relationship between A&E and mental health services for people who have self-harmed

Most people who self-harm and who present to health services will attend an accident and emergency department located on the site of a general hospital. As well as access to medical and surgical beds, many A&E departments have short stay ward facilities where people who have taken an overdose can recover. A&E departments must also be able to offer psychosocial assessments; this requires an interview room with adequate safety features.

With the exception of some small minor injury units, which are staffed by nurses alone, most A&E departments are run by a team of doctors and nurses, including Emergency Nurse Practitioners, with training in accident and emergency medicine. Few employ staff with specialist mental health skills; it is therefore essential that there is close working between A&E departments and the local mental health service.

The structural relationship between A&E departments and mental health services varies greatly. In most parts of England and Wales, the two are managed by different NHS trusts and in some places there are no mental health services based on the site of an A&E department. Also, in some settings there is no liaison psychiatrist dedicated to act as the bridge between mental health services and the general hospital. Regardless of the local service configuration, the guideline endorses the recommendations of the Royal College of Psychiatrists and the British Association for Accident and Emergency Medicine (Royal College of Psychiatrists, 1994), that:

- There is a joint responsibility for commissioners, mental health service managers and acute service managers to ensure that the input of mental health services to A&E departments is not overlooked in negotiations;

- A consultant psychiatrist should be named as the senior member of staff in the local mental health services responsible for liaison with the A&E department;

- A liaison group, with representatives from the A&E department and from mental health services should review issues of joint working between the two services. This group might double-up as a self-harm services planning group (Royal College of Psychiatrists, 1994).
In keeping with this organisational diversity, the nature and quantity of provision of specialist mental health input to A&E departments, and so to the assessment and care of people who have self-harmed, also varies greatly. In some sites, psychosocial assessments are made by mental health nurses or social workers dedicated to working with people who have self-harmed. In others, these are undertaken by psychiatrists and/or psychiatric nurses as part of a more general mental health liaison service working closely with the A&E team. In places where the relationship is less well developed, the only on-site, specialist mental health input to A&E is a trainee psychiatrist, whose main clinical responsibilities are elsewhere, working as part of an on-call duty rota. Often the nature and extent of mental health input to A&E will vary from shift to shift.

These differing arrangements are likely to affect the uptake of subsequent mental health care, as well as the quality and consistency of the psychosocial assessments. Where dedicated teams or workers make the assessments, they will often also provide short-term, follow up mental health care for people discharged from A&E or work assertively to ensure that such care is provided by locality teams. This is more difficult to achieve in settings where assessments are made by junior doctors working as part of an on-call rota.

Unfortunately, the training and supervision for junior psychiatrists in the assessment, referral, treatment and follow-up varies considerably (Taylor, 1998). This is important because of the high proportion, estimated to be around 60% in one study (van Heeringen, 1992), of those referred from A&E for specialist mental health care who fail to attend the subsequent appointment. This situation is even more serious when it is remembered that about 50% of people attending the emergency department following an act of self-harm are either not offered, or do not wait for a psychosocial assessment in the emergency department. A number of studies have introduced different types of interventions to improve follow-up which are reviewed in Chapter 9.

Whatever the arrangement, the principles underpinning the management of those who self-harm are the same (Royal College of Psychiatrists, 1994; also see Section 2.11.1). Whether the detailed psychosocial assessment is done by a member of the A&E team or by a specialist mental health worker, the person must have had sufficient training and experience and have access to specialist supervision.

The requirement that 90% of patients must not wait longer than four hours from the time of entering an A&E department to the time of departure applies equally to people who have self-harmed (Department of Health, 2001). The Royal College of Psychiatrists and British Association of Accident and Emergency Medicine have proposed standards for the response times of mental health staff requested to conduct psychosocial assessments (Box 6).
Box 5: Proposed response times (from being called) for mental health staff requested to conduct a psychosocial assessment in A&E

<table>
<thead>
<tr>
<th></th>
<th>Urban areas</th>
<th>Rural areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>First line attendance</td>
<td>30 minutes</td>
<td>90 minutes</td>
</tr>
<tr>
<td>Section 12 approved doctor</td>
<td>60 minutes</td>
<td>120 minutes</td>
</tr>
</tbody>
</table>

2.12 The prevention of self-harm

It is not within the scope of this guideline to make recommendations about the primary prevention of self-harm. However, it is important to acknowledge the potential for action, at the national level, that might reduce the number of people who self-harm or the seriousness of the consequences. These factors overlap with those that influence suicide rates (Department of Health, 2002); they include:

- The socio-economic conditions that influence the prevalence of self-harm and problems with which it is associated, such as alcohol and substance misuse and mental illness (Gunnell et al., 1995; Hawton et al., 2001a).

- The availability of the means of self-harm. There is some evidence that a reduction in pack size for over-the-counter drugs has reduced the severity of the adverse consequences of overdose of aspirin and paracetamol (Hawton et al., 2001b; Hawton, 2002).

- The development and use of prescription drugs which are safer in overdose: the advent and rapid uptake of the SSRIs was at least in part the result of their reduced toxicity in overdose compared to the older tricyclic antidepressants, although a parallel reduction in the death rate from tricyclic overdose has not been forthcoming (Wilkinson et al., 2002).

- The overall rate of prescribing of psychotropic medication may causally influence the rate of self-poisoning (Forster & Frost, 1985) suggesting that prescription of psychotropic medication should be considered a public health issue.

- Factors that might promote self-harm as a culturally acceptable behaviour; particularly in the young. This would include the connection between self-harm and its portrayal in the media (Blood & Pirkis, 2001; Pirkis & Blood, 2001a,b; Hawton & Williams, 2001).

- Product information may have a place in suicide prevention strategies: the National Institute for Mental Health in England (NIMHE) is currently seeking to improve the safety warnings for over-the-counter...
medicines as a part of the UK Suicide Prevention Strategy (Department of Health, 2002), although it has to be recognised that information on the risks of overdose and poisoning could be used to aid suicide.

2.13 Research recommendations

2.13.1 Research, using appropriate survey and rigorous qualitative methods, should be conducted about the meaning of self-harm to people from different ethnic and cultural groups. This should include the exploration of issues of intentionality.

2.13.2 Epidemiological research should be conducted to determine the prevalence of self-harm in refugees and asylum seekers.

2.13.3 An adequately powered epidemiological study, reporting all relevant outcomes, should be undertaken to establish morbidity and mortality rates for specific drug ingestions.
3 Methods used to develop this guideline

3.1 Overview
The development of this guideline drew upon methods outlined by NICE (NICE, 2001; Eccles & Mason, 2001). A team of experts, professionals, service users and carers, known as the Guideline Development Group (GDG) with support from NCCMH staff undertook the development of a patient centred, evidence-based guideline. There are six basic steps in the process of developing a guideline:

- Define the scope, which sets the parameters of the guideline and provides a focus and steer for the development work
- Define clinical questions considered important for practitioners and service users
- Develop criteria for evidence searching and search for evidence
- Design validated protocols for systematic review and apply to evidence recovered by search
- Synthesise and (meta-) analyse data retrieved, guided by the clinical questions, and produce evidence statements
- Answer clinical questions with evidence-based recommendations for clinical practice.

The clinical practice recommendations made by the GDG are therefore derived from the most up-to-date and robust evidence base for the clinical effectiveness of treatments and services used in the management of self-harm. In addition, to ensure a service user and carer focus, the concerns of service users and carers regarding clinical practice have been highlighted and addressed by good practice points and recommendations agreed by the whole GDG. The evidence-based recommendations and good practice points are the core of this guideline.

3.2 The Guideline Development Group
The GDG consisted of service users and carers, academic experts in psychiatry and toxicology, and professionals from psychiatry, emergency medicine, general practice, social work services, the ambulance service and the...
Samaritans. NCCMH staff undertook clinical and health economics literature searches, reviewed and presented the evidence to the GDG, managed the process and contributed to the drafting of the guideline.

3.2.1 Guideline Development Group meetings
Twenty-one GDG meetings were held between June 2002 and December 2003. During each day-long meeting clinical evidence was reviewed and assessed to develop statements and recommendations. At each meeting all GDG members declared any potential conflict of interests. Service user and carer concerns were routinely discussed as part of a standing agenda.

3.2.2 Topic groups
The GDG divided its workload along clinically relevant lines to maximise the use of expert knowledge brought to the group by individual members. At the start of the development process two topic groups were formed: the Medical topic group covered emergency department triage systems in relation to self-harm, and physical treatments including the management of poisoning and cuts; and the Psychosocial topic group covered issues concerning risk and psychosocial assessment together with psychological and pharmacological treatments for self-harm. (A third topic group was formed following the resignation of the service users from the GDG – see Section 3.2.3 below.) Each topic group was chaired by a GDG member with expert knowledge of the topic area. Topic groups refined the clinical definitions of treatment interventions, reviewed and prepared the evidence with the NCCMH review team. Topic group leaders reported the status of their group’s work as part of the GDG standing agenda. All GDG members assisted in drafting sections of the guideline relevant to their area of expertise.

3.2.3 Service users and carers
Individuals with direct experience of services – i.e., experts by experience - gave an integral service user focus to the GDG and the guideline. The GDG originally included two service users and a carer. They contributed as full GDG members to developing clinical questions, helping to ensure that the evidence addressed their views and preferences, highlighting sensitive issues and terminology associated with self-harm, and bringing service-user research to the attention of the GDG. The service users resigned from the group part-way through the development process. Since the GDG felt that the guideline development process was too advanced for new service users to take a full role in the process, it invited the Director of the NICE Patient Involvement Unit to join the GDG. In addition, it set up a new topic group to represent service user views in the development process, inviting three service users to join this group. As part of its work the topic group convened two focus groups with service users. Material from these was used to
supplement the literature review of user experiences of services (Chapter 5) and to support the development of good practice points.

### 3.2.4 Special advisors

Special advisors who had specific expertise in one or more aspects of treatment and management relevant to the guideline, assisted the GDG, commenting on specific aspects of the developing guideline and making presentations to the GDG. Special advisors are listed in the guideline acknowledgements.

### 3.2.5 National and international experts

National and international experts in the area under review were identified through the literature search and through the experience of the GDG members. These experts were contacted to recommend unpublished or soon-to-be published studies in order to ensure up-to-date evidence was included in the evidence base for the guideline. Appendix 5 lists researchers who were contacted.

### 3.3 Clinical questions

Clinical questions were used to guide the identification and interrogation of the evidence base. The questions were developed using a modified nominal group technique. The process began by asking each member of the GDG to submit as many questions as possible. The questions were then collated and refined by the review team. At a subsequent meeting, the guideline chair facilitated a discussion to further refine the questions. At this point, the GDG members were asked to rate each question for importance. The results of this process were then discussed and consensus reached about which questions would be of primary importance and which would be secondary. The GDG aimed to address all primary questions, while secondary questions would only be covered time permitting. Appendix 6 lists the clinical questions.

### 3.4 Systematic clinical literature review

The aim of the clinical literature review was to identify and synthesise systematically all relevant evidence in order to answer the clinical questions developed by the GDG. Thus, clinical practice recommendations are evidence-based as far as possible.

Where an existing NICE Technology Appraisal addressed one of the clinical questions, the GDG were obliged to adopt the relevant existing recommendations. If evidence was not available, then informal consensus methods were used (see section 3.4.4) and the need for future research was specified.
A stepwise, hierarchical approach was taken to locating and presenting evidence to the GDG. The NCCMH developed the methodology for this process with advice from the National Guidelines Support and Research Unit (NICE) and after considering recommendations from a range of other sources. These included:

- Centre for Clinical Policy and Practice of the New South Wales Health Department (Australia)
- Clinical Evidence Online
- Cochrane Collaboration
- New Zealand Guideline Group
- NHS Centre for Reviews and Dissemination
- Oxford Centre for Evidence-Based Medicine
- Scottish Intercollegiate Guidelines Network (SIGN)
- United States Agency for Health Research and Quality
- Oxford Systematic Review Development Programme.

3.4.1 The review process
For clinical questions concerning interventions the evidence base was formed from high quality randomised controlled trials (RCTs). For clinical questions concerning issues and procedures involved in the management of self-harm the evidence base was formed from well conducted research of a design relevant to the clinical question.

The review process involved:

- Developing search filters
- Searching for existing systematic reviews
- Searching for new primary research
- Selecting studies
- Synthesising the evidence.

3.4.1.1 Developing search filters
The review team developed search filters to search electronic databases that combined subject headings with free-text phrases. A filter was developed for the general topic ‘self-harm’. This was combined with specific filters for a particular clinical question and appropriate research design (for example, ‘systematic review’ or ‘RCT’) as necessary. Occasionally, for example, for the review of the treatment of poisoning, the self-harm filter was modified. Search filters are in Appendix 7.
1.1.1.1 Searching for existing systematic reviews

The NCCMH review team undertook searches for existing systematic reviews published in English since 1995 (an arbitrary cut-off date to reduce the number of references found and to ensure recency), which would answer the clinical questions posed by the GDG. The initial searches were undertaken in June 2002. A search of PubMed (MEDLINE) was also undertaken weekly beginning in April 2003 until the end of the guideline development process. The following databases were searched: EMBASE, MEDLINE, PsycINFO, Cochrane Library, CINAHL, Web of Science.

Systematic reviews were assessed for quality and eligibility (Appendices 8 and 9) before being assessed by the GDG for relevance to a clinical question. Where a relevant systematic review was identified searches were undertaken for studies published too late to be included beginning two years before the publication date of the review in question. Where authors stated the date searches had been undertaken, the NCCMH review team undertook new searches from the beginning of that year. Each study included in an existing review was subjected to the same quality checks as those located through NCCMH searches, and the data were re-extracted according to NCCMH protocols (see below). Where existing reviews had been undertaken using Review Manager (any version) authors were approached for data sets, although any used were checked for accuracy. For clinical questions where no existing systematic review was identified, searches were undertaken for all relevant evidence.

3.4.1.2 Searching for studies

To answer clinical questions concerned with interventions an initial search was undertaken for all RCTs in the area of self-harm. Where this did not reveal any studies to answer a particular clinical question, additional searches were undertaken outside of the area of self-harm, for example, for the management of wounds. Material to answer other clinical questions was searched for separately. For all questions the following electronic databases were searched: EMBASE, MEDLINE, PsycINFO, Cochrane Library, CINAHL. For the review of service user experience the grey literature database, Sigle, was also searched. In addition, hand searches were also made of the reference lists of all eligible studies, as well as of the list of evidence submitted by registered stakeholders (Appendix 3). Known experts in the field (see Appendix 5), based both on the references identified in earlier steps and on advice from GDG members, were approached for unpublished RCTs\(^1\). Studies were considered provided a full trial report was available. Studies published in languages other than English were used provided a native speaker was available.

\(^1\) Unpublished full trial reports were accepted where sufficient information was available to judge eligibility and quality.
If no RCTs were found to answer a clinical question the GDG adopted a consensus process (see Section 3.4.6). Future guidelines will be able to update and extend the usable evidence base starting from the evidence collected, synthesised and analysed for this guideline.

3.4.1.3 Study selection
All references located in searches of electronic databases were downloaded into Reference Manager and searched liberally to exclude irrelevant papers. The titles of excluded papers were double-checked by a second reviewer. All primary-level studies included after the first scan of citations were acquired in full and re-evaluated for eligibility. Appendix 8 lists the standard inclusion and exclusion criteria. Additional eligibility criteria were developed to assess trials of pharmacotherapy, and these are listed in chapter 7. All eligible papers were critically appraised for methodological quality (see Appendix 10). The eligibility of each study was confirmed by at least one member of the appropriate topic group.

For some clinical questions, it was necessary to prioritise the evidence with respect to the UK context. To make this process explicit, the topic group members took into account the following factors when assessing the evidence:

- Participant factors (e.g., gender, age, ethnicity)
- Provider factors (e.g., model fidelity, the conditions under which the intervention was performed, the availability of experienced staff to undertake the procedure)
- Cultural factors (e.g., differences in standard care, differences in the welfare system).

It was the responsibility of each topic group to decide which prioritisation factors were relevant to each clinical question in light of the UK context, and then decide how they should modify their recommendations.

3.4.2 Synthesising evidence from RCTs

3.4.2.1 Data extraction
Where possible, outcome data from all eligible studies that met quality criteria were extracted onto a data extraction form (Appendix 11) and input into Review Manager 4.2 (Cochrane Collaboration, 2003). Where trial reports contained incomplete data and it was possible to contact the original authors, additional information was sought. Where mean endpoint or change scores were extracted and trial reports did not provide standard deviations, standard conversion formulas were used (See Appendix 12).

All dichotomous outcomes were calculated on an intention-to-treat basis (i.e., a ‘once-randomised-always-analyse’ basis). This assumes that those participants who ceased to engage in the study – from whatever group – had an unfavourable outcome(with the exception of the outcome of ‘death by suicide’). The effects of high attrition rates (defined as more than 50% of
participants in a particular group leaving treatment early) were examined with sensitivity analyses, and studies were removed from efficacy outcomes if the possibility of bias was detected.

Consultation was used to overcome difficulties with coding. Data from studies included in existing systematic reviews were extracted independently by one reviewer directly into Review Manager and checked by a second reviewer. Where consensus could not be reached, a third reviewer was consulted. Masked assessment (i.e., blind to the journal from which the article comes, the authors, the institution, and the magnitude of the effect) was not used since it is unclear that doing so reduces bias (Jadad et al., 1996; Berlin, 2001).

Information describing each study was also extracted and input into Review Manager 4.2. This was used to generate evidence tables (see Appendix 17). Where meta-analysis was not appropriate and/or possible, the reported results from each primary-level study were also presented in the evidence tables.

3.4.2.2 Meta-analysis

Where possible meta-analysis was used to synthesise data. If necessary, sub-analyses were used to answer clinical questions not addressed in the original studies or reviews.

The GDG were given a graphical presentation of the results using forest plots generated with Review Manager. Each forest plot displayed the effect size and 95% Confidence Interval (CI) for each study as well as the overall summary statistic with its 95% CI. The graphs were organised so that the display of data in the area to the left of the ‘line of no effect’ indicated a ‘favourable’ outcome for the treatment in question.

Dichotomous outcomes were presented as relative risks (RR) with the associated 95% CI (see Figure 1). A relative risk (or risk ratio) is the ratio of the treatment event rate to the control event rate. A RR of 1 indicates no difference between treatment and control. In Figure 1, the overall RR of 0.73 indicates that the event rate (i.e., non-remission rate) associated with intervention A is about ¾ of that with the control intervention, or in other words, intervention A reduces non-remission rates by 27%. In addition, the 95% CI around the RR does not cross the ‘line of no effect’ indicating that this is a statistically significant effect. The CI shows with 95% certainty the range within which the true treatment effect should lie.

The Number Needed to Treat (NNT) or the Number Needed to Harm (NNH) was reported for each statistically significant outcome where the baseline risk (i.e., control group event rate) was similar across studies. In addition, NNTs calculated at follow-up were only reported where the length of follow-up was similar across studies. When length of follow-up or baseline risk varies
(especially with low risk), the NNT is a poor summary of the treatment effect (Deeks, 2002).

Continuous outcomes were analysed as weighted mean differences (WMD) or standardised mean differences (SMD) when different measures (or different versions of the same measure) were used in different studies to estimate the same underlying effect (see Figure 2).

To check for heterogeneity between studies, both the I² test of heterogeneity and the chi-squared test of heterogeneity (p < .10), as well as visual inspection of the forest plots were used. The I² statistic describes the proportion of total variation in study estimates that is due to heterogeneity (Higgins & Thompson, 2002). An I² of less than 30% was taken to indicate mild heterogeneity and a fixed effects model was used to synthesise the results. This assumes that the underlying effect is the same (Egger et al., 2001). An I² of more than 50% was taken as notable heterogeneity. In this case, an attempt was made to explain the variation. If studies with heterogeneous results were found to be comparable, a random effects model was used to summarise the results (DerSimonian & Laird, 1986). In the random effects analysis, heterogeneity is accounted for both in the width of CIs and in the estimate of the treatment effect. With decreasing heterogeneity the random effects approach moves asymptotically towards a fixed effects model. An I² of 30 to 50% was taken to indicate moderate heterogeneity. In this case, both the chi-squared test of heterogeneity and a visual inspection of the forest plot were used to decide between a fixed and random effects model.
To explore the possibility that the results entered into each meta-analysis suffered from publication bias, data from included studies were entered, where there were sufficient data, into a funnel plot. Asymmetry of the plot was taken to indicate possible publication bias and investigated further.

3.4.3 Developing statements and graded recommendations
The summary statistics (effect sizes; ES) and evidence tables formed the basis for developing clinical statements and recommendations.

3.4.3.1 Developing statements
For each outcome a clinical statement describing the evidence found was developed. To do this both the statistical and clinical significance (i.e., the likely benefit to service users) of the summary statistic were taken into account.

Assessing statistically significant summary statistics
Where a statistically significant summary statistic (effect size; ES) was obtained (after controlling for heterogeneity), the GDG considered whether this finding was of clinical significance (i.e., likely to be of benefit to patients) taking into account the trial population, nature of the outcome and size of the effect. On the basis of this consideration the ES was characterised as ‘clinically significant’ or not.

Once clinical significance had been established the strength of the evidence was assessed by examining the 95% CIs surrounding the ES. For level-1 evidence, where the ES was judged clinically significant and had a CI entirely within a clinically relevant range, the result was characterised as ‘strong evidence’ (S1, Flowchart 1: Guideline Statement Decision Tree). For non level-1 evidence or in situations where the upper/lower bound of the CI was not clinically significant, the result was characterised as ‘some evidence’ (S2).

Where an ES was statistically significant, but not clinically significant and the CI excluded values judged clinically important, the result was characterised as ‘unlikely to be clinically significant’ (S3). Alternatively, if the CI included clinically important values, the result was characterised as ‘insufficient to determine clinical significance’ (S6).

Assessing non-statistically significant summary statistics
Where a non-statistically significant ES was obtained, the GDG reviewed the trial population, nature of the outcome, size of the effect and, in particular, the CI surrounding the result. If the CI was narrow and excluded a clinically significant ES, this was seen as indicating evidence of ‘no clinically significant difference’ (S4), but where the CI was wide this was seen as indicating ‘insufficient evidence’ to determine if there was a clinically significant difference or not (S5).
In order to facilitate consistency in generating and drafting the clinical statements the GDG utilised a statement decision tree (see Flowchart 1: Guideline Statement Decision Tree). The flowchart was designed to assist with, but not replace clinical judgement.
Flowchart 1: Guideline Statement Decision Tree

- **S1**: "There is strong evidence suggesting that there is a clinically significant difference between x and y (after controlling for heterogeneity)."
- **S2**: "There is limited evidence suggesting that there is a clinically significant difference between x and y with x being superior on..."
- **S3**: "There is evidence suggesting that there is a statistically significant difference between x and y but the size of this difference is unlikely to be of clinical significance."
- **S4**: "There is evidence suggesting that there is no clinically significant difference between x and y on..."
- **S5**: "There is insufficient evidence to determine if there is a clinically significant difference between x and y on..."
- **S6**: "There is evidence suggesting that there is a statistically significant difference between x and y but there is insufficient evidence to determine its clinical significance."

**Key**
- Start
- Decision to be taken
- Action required

**CI = Confidence Interval**  
**ES = Effect Size**
3.4.3.2 Developing graded recommendations

Once all evidence statements relating to a particular clinical question were finalised and agreed by the GDG, the associated recommendations were produced and graded. Recommendations were graded A to C based on the level of associated evidence, or noted as coming from a previous NICE guideline or health technology appraisal (see text box 1).

Text Box 1: Hierarchy of evidence and recommendations grading scheme

<table>
<thead>
<tr>
<th>Level</th>
<th>Type of evidence</th>
<th>Grade</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Evidence obtained from a single randomised controlled trial or a meta-analysis of randomised controlled trials</td>
<td>A</td>
<td>At least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation (evidence level-1) without extrapolation</td>
</tr>
<tr>
<td>IIa</td>
<td>Evidence obtained from at least one well-designed controlled study without randomisation</td>
<td>B</td>
<td>Well-conducted clinical studies but no randomised clinical trials on the topic of recommendation (evidence levels 2 or 3); or extrapolated from level-1 evidence</td>
</tr>
<tr>
<td>IIb</td>
<td>Evidence obtained from at least one other well-designed quasi-experimental study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities</td>
<td>C</td>
<td>Expert committee reports or opinions and/or clinical experiences of respected authorities (evidence level IV). This grading indicates that directly applicable clinical studies of good quality are absent or not readily available</td>
</tr>
<tr>
<td>GPP</td>
<td>Recommended good practice based on the clinical experience of the GDG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICE</td>
<td>Evidence from NICE guideline or technology appraisal</td>
<td>NICE</td>
<td>Evidence from NICE guideline or Technology Appraisal</td>
</tr>
</tbody>
</table>


Grading allowed the GDG to distinguish between the level of evidence and the strength of the associated recommendation. It is possible that a statement
of evidence would cover only one part of an area in which a recommendation was to be made or would cover it in a way that would conflict with other evidence. In order to produce more comprehensive recommendations suitable for people in England and Wales, the GDG had to extrapolate from the available evidence. This led to a weaker level of recommendation (i.e., B, as data were based upon level-1 evidence). In addition, it is possible to have methodologically sound (level-1) evidence about an area of practice that is of little direct clinical relevance or has such a small effect that it is of little practical importance. In this case, the evidence would attract a lower strength of recommendation (i.e. there would be necessity for extrapolation).

The process also allowed the GDG to moderate recommendations based on factors other than the strength of evidence. Such considerations include the applicability of the evidence to the people in question, economic considerations, values of the development group and society, or the group’s awareness of practical issues (Eccles et al., 1998).

3.4.4 Synthesising qualitative material
Qualitative material was used to answer the clinical question about user experiences of services. Synthesising the material using a formal meta-synthesis methodology (for example, Noblitt & Hare, 1988) was initially considered. However, such techniques are not well developed and the studies found in literature searches were unsuitable for such analysis. Therefore, a simple content analysis was undertaken. In order to triangulate the findings – i.e., compensate for possible weaknesses in one data collection or analysis method by using additional methods – material from a systematic literature review was combined with that from two focus groups and an interview conducted by the GDG.

3.4.5 Method used to answer a clinical question in the absence of appropriately designed, high-quality research
In the absence of level-1 evidence (or a level that is appropriate to the question), or where the GDG were of the opinion (on the basis of previous searches or their knowledge of the literature) that there were unlikely to be such evidence, an informal consensus process was adopted. This process focused on those questions that the GDG considered a priority.

3.4.5.1 Informal consensus
The starting point for this process of informal consensus was that a member of the topic group identified, with help from the systematic reviewer, a narrative review that most directly addressed the clinical question. Where this was not possible, a brief review of the recent literature was initiated.
This existing narrative review or new review was used as a basis for beginning an iterative process to identify lower levels of evidence relevant to the clinical question and to lead to written statements for the guideline. The process involved a number of steps:

1. A description of what is known about the issues concerning the clinical question was written by one of the topic group members.

2. Evidence from the existing review or new review was then presented in narrative form to the GDG and further comments were sought about the evidence and its perceived relevance to the clinical question.

3. Based on the feedback from the GDG, additional information was sought and added to the information collected. This may include studies that did not directly address the clinical question but were thought to contain relevant data.

4. If, during the course of preparing the report, a significant body of primary-level studies (of appropriate design to answer the question) were identified, a full systematic review was done.

5. At this time, subject possibly to further reviews of the evidence, a series of statements that directly addressed the clinical question were developed.

6. Following this, on occasions and as deemed appropriate by the development group, the report was then sent to appointed experts outside of the GDG for peer review and comment. The information from this process was then fed back to the GDG for further discussion of the statements.

7. Recommendations were then developed and could also be sent for further external peer review.

8. After this final stage of comment, the statements and recommendations were again reviewed and agreed upon by the GDG.

3.5 Health economics
The aim of the health economics review was to contribute to the guideline development process data on the economic burden of self-harm in order to help the decision-making process. This is included in Chapter 2. The search strings used are in Appendix 7.
3.6 Stakeholder contributions

Professionals, service users, and companies have contributed to and commented on the guideline at key stages in its development. Stakeholders for this guideline include:

- Service user/carer stakeholders: the national service user and carer organisations that represent people whose care is described in this guideline
- Professional stakeholders: the national organisations that represent health care professionals who are providing services to service users
- Commercial stakeholders: the companies that manufacture medicines used in the treatment of self-harm
- Primary Care Trusts
- Department of Health and Welsh Assembly Government.
- Regulatory agencies

Stakeholders have been involved in the guideline’s development at the following points:

- Commenting on the initial scope of the guideline
- Contributing lists of evidence to the GDG
- Commenting on the first and second drafts of the guideline.

3.7 Validation of this guideline

This guideline has been validated through two consultation exercises. The first consultation draft was submitted to the NICE Guidelines Advisory Committee Panel, and circulated to stakeholders and other reviewers nominated by GDG members.

The GDG reviewed comments from stakeholders, the NICE Guidelines Advisory Committee, a number of health authority and trust representatives and a wide range of national and international experts from the first round of consultation. The GDG then responded to all comments and prepared a final consultation draft which was submitted to NICE, circulated to all stakeholders for final comments and posted on the NICE website for public consultation. The final draft was then submitted to the NICE Guidelines Advisory Committee for review prior to publication.
4 Summary of clinical practice recommendations

4.1 Service user experience of services

The clinical practice recommendations are ordered according to the ‘care pathway’ normally experienced in emergency departments. However, most of the recommendations can be applied to any treatment or assessment situation involving a person who has self-harmed.

4.1.1 General principles

4.1.1.1 People who have self-harmed should be treated with the same care and respect as any patient. In addition, healthcare professionals should take full account of the likely distress associated with self-harm. [GPP]

4.1.1.2 When caring for people who repeatedly self-harm, staff should be aware that the individual’s reasons for self-harming may be different on each occasion and therefore each episode needs to be treated in its own right. [GPP]

4.1.1.3 Staff should involve people who self-harm in all discussions and decision-making about their treatment and subsequent care. To do this, staff should provide the person with full information about the care options. [GPP]

4.1.1.4 People who self-harm should be allowed, if they wish, to be accompanied by a family member, friend or advocate during assessment and initial treatment. [GPP]

4.1.2 Assessment and evaluation

4.1.2.1 When assessing people who self-harm, staff should ask service users to explain their feelings and understanding of the self-harm in their own words. [GPP]

4.1.2.2 Staff responsible for triage should take account of the underlying emotional distress, which may not be outwardly exhibited, as well as the severity of injury when making decisions about priority for treatment. [GPP]
4.1.3 Waiting for treatment

4.1.3.1 If a person has to wait for treatment, her or she should be offered an environment which is safe, supportive and minimises their distress. For many patients, this may be a separate quiet room with supervision and contact to ensure safety. [GPP]

4.1.4 The physical treatment of self-harm

4.1.4.1 People should be offered treatment for the physical consequences of self-harm, regardless of their willingness to accept psychosocial assessment or psychiatric treatment. [GPP]

4.1.4.2 Adequate anaesthesia should be offered to people throughout the process of suturing. [GPP]

4.1.5 Post-care services and information

4.1.5.1 Staff should provide appropriate written information, which might include details of local services, self-help groups and harm minimisation. [GPP]

4.1.6 Staff training and the organization of services

4.1.6.1 Clinical and non-clinical staff who have contact with people who self-harm should be provided with appropriate training to equip them to understand and care for people who have self-harmed.[(C]

4.1.6.2 People who self-harm should be involved in the planning and delivery of training for staff. [GPP]

4.1.6.3 Strategic health authorities should ensure that people who self-harm are involved in the commissioning, planning and evaluation of services for people who self-harm [GPP]

4.2 Consent

4.2.1.1 All staff who have contact, in the emergency situation, with people who have self-harmed must understand that capacity should be assumed unless there is evidence to the contrary. They should know how to test for capacity and how to make decisions about when treatment and care can be given without consent. [GPP]

4.2.1.2 Staff should give full information and make all efforts necessary to ensure that someone who has self-harmed can give, and has the opportunity to give, meaningful and informed consent before
any procedure (eg conveyance to hospital) or treatment is initiated. [GPP]

4.2.1.3 Ambulance staff, triage nurses and emergency department medical staff should assess and document mental capacity as part of the routine assessment of people who have self-harmed. Staff should attempt to obtain relevant information from relatives, friends, carers and other key informants to inform the assessment. [GPP]

4.2.1.4 If a person is assessed as being mentally incapable, staff have a responsibility to act in that person’s best interests. If necessary this can include conveyance to hospital, detaining to allow assessment and treating against the person’s stated wishes. [GPP]

4.2.1.5 Staff should take into account that a person’s capacity to make informed decisions may change over time. Whether it has been possible to obtain consent or not, attempts should be made to explain each new treatment or procedure and obtain consent before it is initiated. [GPP]

4.2.1.6 Psychiatrists should understand when and how the Mental Health Act can be used to treat the physical consequences of self-harm. [GPP]

4.2.1.7 Staff who have emergency contact with children and young people who have self-harmed must understand how issues of capacity and consent apply to this group. [GPP]

4.3 The medical and surgical care of people who have self-harmed

4.3.1 Introduction

4.3.1.1 For the specific management and treatment of overdose with substances not covered in this guideline, clinicians should consult with their local toxicology department, TOXBASE or discussing the individual case with the NPIS. [GPP]

4.3.2 The management of self-harm in primary care

4.3.2.1 Following an episode of self-harm presenting in primary care, healthcare workers should establish the likely physical risk, and undertake a full assessment including physical, psychological and social needs in an atmosphere of respect and understanding. [GPP]
4.3.2.2 In the assessment and management of self-injury in primary care, health care workers should refer service users for urgent treatment in an emergency department if assessment suggests there is a significant risk to the individual who has self-harmed. [GPP]

4.3.2.3 All people who have self-poisoned and present to primary care should be urgently referred to the nearest emergency department, especially in view of the fact that the nature and quantity of the ingested substances may not be clearly known to the person who has self poisoned. [GPP]

4.3.2.4 For people who have self-poisoned and present to primary care within two hours of ingestion, healthcare practitioners should consider offering activated charcoal if the person is fully conscious and able to protect his or her own airway, at the same time as referral to the emergency department. [A]

4.3.2.5 All people who have self-harmed should be assessed for risk, which should include identification of the main clinical and demographic features, and psychological characteristics known to be associated with risk, in particular depression, hopelessness and continuing suicidal intent. [C]

4.3.2.6 If urgent referral to an emergency department is not considered necessary for people who have self-harmed in primary care, a full psychological and social assessment should be undertaken to identify the need for urgent referral to secondary mental health services. [GPP]

4.3.2.7 Assessment of needs should be comprehensive and include evaluation of the social, psychological and motivational factors specific to the act of self-harm, current intent and hopelessness, as well as a full mental health and social needs assessment. [C]

4.3.2.8 Healthcare practitioners who may have to assess and/or treat people who have self-harmed should ensure that they are properly trained and competent to undertake assessment and treatment as necessary. [GPP]

4.3.2.9 Consideration should be given to the patient’s welfare during transportation to any referral organisation and if necessary, this should be supervised by an appropriate person where there is a risk of further harm or reluctance to attend other care centres. [GPP]

4.3.2.10 Following assessment and treatment of self-harm in primary care, the outcome of the risk and needs assessment, and full details of
the treatment provided, should be forwarded to the appropriate secondary mental health team at the earliest opportunity. [GPP]

4.3.3 The management of self-harm by ambulance staff

4.3.3.1 Ambulance staff should be given effective support, including the provision of telephone advice regarding the assessment of mental capacity and the possible use of the Mental Health Act, from crisis resolution teams and section 12 approved doctors, to assist in the urgent assessment of people who have self-harmed and who may be unwilling to accept further treatment and may have impaired mental capacity, or who may be mentally ill. PCTs, mental health trusts and ambulance services should consider supporting the formal development of such a service. [GPP]

4.3.3.2 When people who have self-harmed are considering refusing further treatment, ambulance staff should provide information about the potential consequences of not receiving treatment when attempting to gain valid consent. [GPP]

4.3.3.3 Ambulance staff should be trained in the assessment and early management of self-harm, including training regarding the different methods, the likely effects if untreated, and the optimal treatments, of each form of self-harm. [GPP]

4.3.3.4 Ambulance Trusts should ensure that systems are in place to provide staff with additional information from toxicology laboratories and through TOXBASE at the scene of an emergency call to help to prevent unnecessary delay in conveying patients to the most appropriate clinical service. [GPP]

4.3.3.5 Ambulance staff should record all information about the service user’s home environment, social and family support network, and history leading to self-harm, as well as the service user’s initial emotional state and level of distress. This information should be passed to emergency department staff. [GPP]

4.3.3.6 In cases of self-poisoning, ambulance staff should obtain all substances and/or medications found at the scene of an emergency call, whether thought to be involved in the overdose or not, and hand these over upon arrival at the emergency department. [GPP]

4.3.3.7 When transporting people who have self-harmed to an emergency department, ambulance staff should take into account the service users preferences when more than one emergency department
facility exists within a reasonable distance, unless doing so significantly increases the risk to the service user. [GPP]

4.3.3.8 In cases where, following an act of self-injury, the service user does not require emergency treatment in the emergency department, ambulance staff should consider, having taken full account of the service users’ preferences, taking the service user to an alternative appropriate service, such as a specialist mental health service. The decision to do so should be taken jointly between the ambulance staff and the receiving service. [GPP]

4.3.3.9 Ambulance Trusts, the emergency department and Community Mental Health Trusts should work in partnership to develop locally agreed protocols for ambulance staff to consider alternative care pathways to emergency department, for people who have self-harmed, where this is appropriate and does not increase the risks to the service user. [GPP]

4.3.3.10 For people who have self poisoned and present to the ambulance service within two hours of ingestion, appropriately trained ambulance staff should consider offering activated charcoal if the person is fully conscious and able to protect his or her own airway, at the same time as referral to an emergency department. [A]

4.3.3.11 In the emergency treatment of opioid overdose with IV naloxone, ambulance staff should adhere to the guidelines established by the Joint Royal Colleges Ambulance Liaison Committee. Particular attention should be given to the possible need for repeated doses of naloxone and frequent monitoring of vital signs, as the effects of naloxone hydrochloride are short-lived in comparison with the effects of most opioids and patients frequently relapse once the drug has worn off. All cases of opioid overdose should be conveyed to hospital, even if the initial response to naloxone has been good. [GPP]

4.3.3.12 Ambulance Trusts should routinely audit incidents of overdose to ensure that interventions are being used consistently. [GPP]

4.3.3.13 Ambulance Trusts should regularly update ambulance staff of any change in the local arrangements for services available for the emergency treatment of people who have self-harmed. [GPP]
4.3.4 Information and laboratory services available to clinicians treating self-poisoning

4.3.4.1 TOXBASE should be available to all clinical staff involved in the emergency treatment of self-poisoning. [GPP]

4.3.4.2 The NPIS telephone number should be available to clinical staff involved in the emergency treatment in a place where it can be used discreetly and without distracting staff from other activities. [GPP]

4.3.4.3 Clinical staff involved in the emergency treatment of self-poisoning should be given training to better understand human toxicology, and in order to make best use of TOXBASE and the NPIS telephone service. The emergency department, in conjunction with local, regional or national toxicology units (including NPIS), should ensure all staff receive regular training. [GPP]

4.3.4.4 Staff involved in the emergency treatment of self-poisoning should collect samples for analysis including blood, urine, gastric contents and, if possible, samples of the suspected poison. [GPP]

4.3.4.5 Emergency department staff involved in collecting samples should be aware of which toxicology tests are available both locally and at the nearest specialised toxicology laboratory. [GPP]

4.3.4.6 Emergency department staff involved in collecting samples should be aware of the correct methods of collecting, handling and storing samples, and of how they should be transferred to the laboratory. [GPP]

4.3.4.7 Where emergency department staff are unsure about the value of undertaking a toxicology assay or about whether an assay is available locally, advice should be sought from the NPIS or directly from a toxicology laboratory. [GPP]

4.3.4.8 Where emergency department staff are unsure about the interpretation of assay results, advice should be sought from the laboratory or NPIS. [GPP]

4.3.4.9 In cases where the suspected poison is a substance for which little toxicology data exists, laboratory data about exposure and absorption should be passed to the NPIS to help in the development of its poisons database. [GPP]
4.3.5  The role of triage in the management of self-harm in emergency departments

4.3.5.1  Consideration should be given to introducing the Australian Mental Health Triage Scale adapted for use in England and Wales as an adjunct to existing triage systems. [C]

4.3.5.2  Triage nurses working in emergency departments should be trained in the use of mental health triage systems. [C]

4.3.5.3  Emergency departments should consider the provision of training for all healthcare staff, working in that environment, in the assessment of mental health needs and the preliminary management of mental health problems. [C]

4.3.5.4  Emergency departments and local mental health services should jointly plan the configuration and delivery of integrated physical and mental health care services for people who self-harm within emergency departments [C]

4.3.5.5  In jointly planning an integrated emergency department service for people who self-harm, service managers may consider integrating mental health professionals into the emergency department, both to improve the psychosocial assessment and initial treatment for people who self-harm, and to provide routine and regular training to non-mental health professionals working in the emergency department [GPP]

4.3.5.6  In addition, emergency department and local mental health services should jointly plan effective liaison psychiatric services available 24 hours a day. [GPP]

4.3.5.7  A psychosocial assessment should not be delayed until after medical treatment is complete, unless life-saving medical treatment is needed, or the patient is unconscious or otherwise incapable of being assessed. [GPP]

4.3.6  Routine screening for plasma paracetamol concentrations

4.3.6.1  Plasma paracetamol concentrations should be measured in all conscious patients with a history of paracetamol overdose, or suspected paracetamol overdose, and in unconscious patients with a history of collapse where drug overdose is a likely diagnosis. [C]
4.3.7 The treatment and management of self-poisoning by gut decontamination

4.3.7.1 Gastro-intestinal decontamination should be considered only for people who have self-harmed by poisoning who present early, are fully conscious with a protected airway, and are at risk of significant harm as a result of poisoning. [B]

4.3.7.2 Healthcare practitioners should offer activated charcoal to any person who has self-poisoned within the last two hours, unless this is contra-indicated, if the person is fully conscious and able to protect his or her own airway. [A]

4.3.7.3 All healthcare professionals who may be involved in the care of people who have self-harmed by poisoning, including ambulance personnel and primary care healthcare workers, should consider ensuring that they are able to offer activated charcoal at the earliest opportunity, and especially within the first two hours following ingestion of poison. [B]

4.3.7.4 Multiple doses of oral activated charcoal should be used only to reduce the absorption of poisons in people who self-harm by poisoning following consultation with NPIS or a poisoning treatment centre. [B]

4.3.7.5 Emetics, including ipecac, should not be used in the management of self-harm by poisoning. [B]

4.3.7.6 Cathartics as a specific treatment should not be used in the management of self-harm by poisoning. [C]

4.3.7.7 Gastric lavage should only be used in the management of self-harm by poisoning following consultation with NPIS or a poisoning treatment centre. [B]

4.3.7.8 In patients who are considered at risk of self-harm by poisoning healthcare professionals should prescribe, whenever possible, those drugs which, whilst effective for their intended use, are least dangerous in overdose. [GPP]

4.3.7.9 In cases where service users have self-poisoned using a prescription medication consideration should be given to prescribing an alternative medicine with a lower toxic profile. [GPP]
4.3.7.10 Harm minimisation strategies should not be offered for people who have self-harmed by poisoning. There are no safe limits in self-poisoning. [GPP]

4.3.7.11 Where service users are likely to repeat self-poisoning, clinical staff (including pharmacists), may consider discussing the risks of self-poisoning with service users, and carers where appropriate. [GPP]

4.3.8 Treatment and management of poisoning with salicylates

4.3.8.1 For people who have self-poisoned with salicylates, are fully conscious, have a protected airway, and present to services within 2 hours after ingestion, activated charcoal should be offered. [A]

4.3.8.2 The further treatment of self-poisoning with salicylates should follow the current guidance outlined in the BNF section on the emergency treatment of poisoning with aspirin. [C]

4.3.9 Treatment and management of paracetamol overdose

4.3.9.1 The NPIS flowchart (Paracetamol overdose: a flowchart to guide management) should be used to guide patient management. This should be easily available to clinicians treating paracetamol poisoning. [C]

4.3.9.2 Activated charcoal should be considered for gut decontamination in cases of paracetamol poisoning presenting up to two hours after ingestion. [B]

4.3.9.3 Intravenous N-Acetylcysteine should be considered in the treatment of paracetamol overdose (although the optimum dose is unknown) unless contraindicated - for example, in patients who report known allergies to NAC, for intravenous drug abusers where intravenous access may be difficult, or in the case of needle phobia, when oral methionine should be considered. [C]

4.3.9.4 N-Acetylcysteine should only be used when full resuscitation equipment is available including access to intravenous antihistamines and cortico-steroids. [GPP]

4.3.9.5 In the event of an anaphylactoid reaction following administration of intravenous NAC, methionine may be considered as an alternative. [GPP]
In cases of staggered ingestion of paracetamol the NPIS flowchart (Paracetamol overdose: a flowchart to guide management) should be used in conjunction with discussion with the NPIS. [GPP]

The use of flumazenil in the treatment and management of benzodiazepine overdose

In patients who are unconscious or showing marked impairment of consciousness in which self-poisoning with a benzodiazepine is suspected, flumazenil should be considered as a diagnostic tool. [A]

When a positive diagnosis of self-poisoning with a benzodiazepine has been made, the possibility of mixed overdose should be considered and investigated if necessary at the earliest opportunity. [GPP]

In unconscious patients in whom self-poisoning with a benzodiazepine is suspected, and the concomitant ingestion of significant amounts of tricyclic antidepressants has been excluded, flumazenil should be considered as a therapeutic option, especially for patients for whom an improved level of consciousness is considered as a clinical priority, such as those who also have consumed other CNS depressants, including alcohol. [A]

When the decision to administer flumazenil has been taken, the clinical team should specifically monitor and document the side effects known to occur with flumazenil, especially physical reactions such as convulsions. [A]

Flumazenil should be used only in the diagnosis or treatment of benzodiazepine overdose when full resuscitation equipment is immediately available. [GPP]

Given the relatively high incidence of adverse psychological events experienced by patients following administration of flumazenil, the minimum effective dose should be used and only for as long as it is clinically necessary. [B]

Treatment and management of opioid overdose

Naloxone should be used in the treatment of opioid overdose. [B]

When using naloxone in the treatment of opioid poisoning, regular monitoring of vital signs should be undertaken routinely until
the patient is able to remain conscious with adequate spontaneous respiration unaided by the further administration of naloxone. [GPP]

4.3.11.3 A minimum safe dose of naloxone should be used to reverse respiratory depression caused by opioids but to prevent the patient becoming agitated. [C]

4.3.11.4 When reversing the effects of long-acting opioids, such as methadone, the use of an intravenous infusion should be considered and the level of consciousness monitored regularly. [C]

4.3.11.5 When reversing the effects of opioid overdose using naloxone in people who are dependent upon opioids, naloxone should be given slowly and preparations made to deal with possible withdrawal effects, especially agitation, aggression and violence. [GPP]

4.3.11.6 Consideration should be given to preventing or reducing the prescription of co-proxamol, especially for people who are at risk of self-harm. [GPP]

4.3.12 The treatment and management of superficial wounds

4.3.12.1 In the treatment and management of injuries caused by self-cutting appropriate physical treatments should be provided without unnecessary delay irrespective of the cause of the injury. [GPP]

4.3.12.2 If the treatment of self-harm by cutting requires the use of sutures or other painful interventions, adequate anaesthesia should be ensured before an intervention is initiated. [GPP]

4.3.12.3 In the treatment and management of people with injuries caused by self-cutting, clinicians should take full account of the additional distress and emotional disturbance experienced by those who self-harm, especially immediately following injury and at presentation for treatment. [GPP]

4.3.12.4 In the treatment and management of superficial uncomplicated injuries of 5cm or less in length, the use of tissue adhesive should be considered as a first-line treatment option. [A]

4.3.12.5 In the treatment and management of superficial uncomplicated injuries of 5cm or less in length, if the service user expresses a preference for the use of skin closure strips, this should be offered as an effective alternative to tissue adhesive. [B]
4.3.12.6 In the treatment and management of superficial uncomplicated injuries of greater than 5cm, or deeper injuries of any length, wound assessment and exploration, in conjunction with a full discussion of preferences with the service user, should determine the appropriate physical treatment provided. [GPP]

4.3.12.7 Before initiating treatment for self-injury, the clinician should provide the service user, and carers where appropriate, with sufficient information regarding treatment options for the service user to fully participate in joint clinical decision making. [GPP]

4.3.12.8 For people presenting for treatment who have a history of self-harm, clinicians may consider offering advice and instructions for the self-management of superficial injuries, including the provision of tissue adhesive. Discussion with an involved mental health worker may assist in the decision about which service users should be offered this treatment option. [GPP]

4.3.12.9 Where service users are likely to repeat self-injury, clinical staff, service users and carers may wish to discuss harm minimisation issues/techniques. Suitable material is available from many voluntary organisations. [GPP]

4.3.12.10 Where service users are likely to repeat self-injury, clinical staff, service users and carers may wish to discuss appropriate alternative coping strategies. Suitable material is available from many voluntary organisations. [GPP]

4.3.12.11 Where service users have significant scarring from self-injury, consideration should be given to providing information about dealing with scar tissue. [GPP]

4.4 Psychosocial assessment after hospital attendance for self-harm

Triage (Emergency Department staff, and professionals based in primary and community)

4.4.1.1 All people who have self-harmed should be offered a preliminary psychosocial assessment at triage (or at the initial assessment in primary or community settings) following an act of self-harm. Assessment should determine a person’s cognitive function and mental capacity, their willingness to remain for further (psychosocial) assessment, their level of distress and the possible presence of mental illness. [C]
For people waiting for physical treatments

4.4.1.2 People who have self-harmed should be provided with clear and understandable information about the care process, both verbally and as written material in a language they understand. [C]

For people who wish to leave before assessment and/or treatment

4.4.1.3 For people who have self-harmed and present to services and wish to leave before psychosocial assessment has been undertaken, assessment of capacity and the presence of mental illness should be undertaken before the person leaves the service. The assessment should be clearly recorded in his or her notes. [C]

4.4.1.4 People who have self-harmed and present to services and wish to leave before psychosocial assessment has been undertaken, and in whom diminished capacity and/or the presence of a mental illness is established, should be referred for urgent psychiatric assessment and appropriate measures taken to prevent such a person leaving the service. [C]

Assessment of need (specialist mental health professionals)

4.4.1.5 All people who have self-harmed should be offered an assessment of needs, which should be comprehensive and include evaluation of the social, psychological and motivational factors specific to the act of self-harm, current intent and hopelessness, as well as a full mental health and social needs assessment. [C]

4.4.1.6 The comprehensive assessment of need should be written clearly in the service users notes. [C]

Assessment of risk

4.4.1.7 All people who have self-harmed should be assessed for risk, which should include identification of the main clinical and demographic features known to be associated with risk, and identification of the key psychological characteristics associated with risk, in particular depression, hopelessness and continuing suicidal intent. [C]

4.4.1.8 The assessment of risk should be written clearly in the service users notes. [GPP]
4.4.1.9 If a standardised risk assessment scale is used to assess risk, this should only be used to aid in the identification of those at high risk of repetition of self-harm or suicide. [C]

4.4.1.10 Standardised risk assessment scales should not be used as a means of identifying service users of supposedly low risk who are not then offered services. [C]

4.4.1.11 Consideration should be given to combining assessment of needs and risks as a single integrated psychosocial assessment process. [GPP]

**Referral and discharge following self-harm**

4.4.1.12 Referral for further assessment and treatment should be based upon the combined assessment of needs and risk. [C]

4.4.1.13 The decision to discharge a person without follow-up following an act of self-harm should be based upon the combined assessment of needs and risks. [C]

4.4.1.14 In particular, the decision to discharge a person without follow-up, following an act of self-harm, should not be solely based upon the presence of low risk and the absence of a mental illness, as many such people may have a range of other social and personal problems that may later increase risk, problems that may be amenable to therapeutic and/or social interventions. [GPP]

**Training**

4.4.1.15 All health professionals, including junior psychiatrists, social workers and psychiatric nurses, who undertake psychosocial assessments for people who have self-harmed should be properly trained and supervised to undertake assessment of needs and risks specifically for people who self-harm. [C]

4.4.1.16 Mental health services and emergency department services should jointly consider the development of regular training programmes in the psychosocial assessment and early management of self-harm, to be undertaken by all health professionals who may assess or treat people who have self-harmed. [C]

**Special issues for children**

4.4.1.17 All children who have self-harmed should be assessed by healthcare practitioners experienced in the assessment of children and
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adolescents who self-harm. Assessment should follow the same principles as for adults who self-harm, but should also include a full assessment of the family and their social situation. [GPP]

4.4.1.18 Initial management should include advising carers of the need to remove all medications or other means of self-harm available to the young person who has self-harmed. [GPP]

4.4.1.19 All children who have self-harmed should normally be admitted overnight to a paediatric ward and assessed fully the following day before discharge or further treatment and care is initiated. [GPP]

Special issues for older people

4.4.1.20 All people over 65 years of age who have self-harmed should be assessed by healthcare practitioners experienced in the assessment of elderly people who self-harm. Assessment should follow the same principles as for adults who self-harm, but should also pay particular attention to the presence of depression, cognitive impairment and physical ill health, and should include a full assessment of their social and home situation. [GPP]

4.4.1.21 All acts of self-harm in people over the age of 65 years should be regarded as evidence of suicidal intent until proven otherwise as the numbers who go on to complete suicide is much higher than in younger adults. [GPP]

4.5 Psychological, pharmacological and psychosocial interventions for the management of self-harm

4.5.1 Following psychosocial assessment for people who have self-harmed, the decision about referral for further treatment and help should be based upon a comprehensive psychiatric, psychological and social assessment, including an assessment of risk, and should not be determined on the basis of having self-harmed. [C]

4.5.2 If conditions are identified that can be treated with psychotherapeutic, pharmacological or other interventions, service users who have self-harmed should be referred, following full consultation between the user, carers (where appropriate) and referring clinician(s), to appropriate services. [C]

4.5.3 The professional making the assessment should inform both mental health services and the service user’s GP, in writing, of the
treatment plan if treatment is offered to a person who has self-harmed who is already in contact with mental health services. [GPP]

4.5.4 For people who have self-harmed and deemed to be at risk of repetition, consideration may be given to offering an intensive intervention combined with outreach. The intensive intervention should give greater access to a therapist than good standard care, and outreach should include following up the service user when an appointment has been missed. The intervention plus outreach should continue for at least 3 months. [C]

4.5.5 For people who self-harm with a diagnosis of borderline personality disorder, consideration may be given to the use of dialectical behaviour therapy. However, this should not preclude other psychological treatments with evidence for effectiveness for people with this diagnosis, but not reviewed for this guideline. [C]

4.5.6 For adolescents who have self-harmed several times, consideration should be given to offering group therapy with other adolescents who have repeatedly self-harmed. This should include at least six sessions. Extending the group therapy may also be offered, the precise length of which should be decided jointly by the clinician and the service user. [B]
5 Service user experience of services

5.1 Introduction

“Professionals are often terrified by self-injury. Their normal empathy with others’ distress and their confidence and ability to help often desert them when faced with someone who persistently hurts themselves. This problem reflects a serious and widespread lack of understanding of self-injury, which results in great inconsistency and inadequacies in services” (Arnold, 1995).

There is a rich and well established service user literature on the subject of self-harm, particularly regarding the acts and meanings of self-harm from the service users’ point of view (Harrison, 1995; Arnold, 1995). From this emerges a picture of self-harm as an activity which is usually done in private, and which forms part of an individual’s coping mechanisms. However, when the acts are made public, misunderstandings and lack of awareness in clinical practice, both in general medicine and psychiatry, can lead to service responses that are not only unhelpful, but may make matters worse for people who self-harm. This lack of understanding, and the fear thus engendered, can manifest itself in the attitudes, language and treatment of service users who self-harm:

“Carers may relieve their disappointment and frustration with the patient by stigmatising her as bad, attention seeking or manipulative, terms which have no explanatory value but do subtly devalue the patient’s distress and can sometimes be used to justify either harsh or indifferent treatment. It is also arguable that apparently therapeutic manoeuvres such as ECT, high-dose medication, or the transfer of care may on occasions be a means of getting rid of a frustrating patient or even punishing her for her refractoriness.” (Tantum & Whittaker, 1992).

Unsurprisingly, health services aim to minimise harm and therefore try to reduce or prevent self-harm as a priority. Many healthcare professionals view self-harm as attempted suicide, and few healthcare professionals consider or discuss the meaning, function or intention of acts of self-harm, instead assuming that suicide was intended and should, therefore be prevented as far as possible. But, in attempting to prevent a person from hurting him- or herself, rather than looking at the underlying causes of such behaviour, or indeed the function such behaviour serves a particular individual, services can inadvertently either exacerbate the behaviour or “drive it underground”. Good practice guidelines developed by users recommend that stopping self-harm should not be a goal of treatment, nor should treatment or care be withheld as a condition of stopping self-harm (Bird & Faulkner, 2000)

Unfortunately, many service users who self-harm, especially those who do so repeatedly, feel that healthcare professionals are less than willing to listen to
people who self-harm, less still to read the wealth of literature regarding self-harm written by service users. This literature not only relates the experience of self-harm and its treatment, it also suggests new practices that would address the problems faced by service users more directly, and from a service users perspective.

Service users often regard themselves as experts by experience, but feel that many healthcare professionals disregard service user literature as somehow lacking authority, a situation that is no longer sustainable in the light of recent policy developments. For example, the Department of Health’s expert patient programme (DoH, 2001) acknowledges that in some conditions, the patient may understand the condition as well as, or better than, the clinician: “this knowledge and experience held by the patient has for too long been an untapped resource. It is something that could greatly benefit the quality of patients’ care and ultimately their quality of life, but which has been largely ignored in the past” (DoH, 2001). The GDG therefore thought it essential to review the service user literature on self-harm. In addition, the GDG decided to meet and discuss self-harm and the experience of services with service users. Service users were also asked to make their own recommendations as to how the experience of services might be improved. Moreover, given the reports of the often negative attitudes held by some healthcare professionals who offer help for people who self-harm, the GDG also decided to examine what literature was available regarding the attitudes of healthcare professionals to self-harm.

This chapter reviews the service user literature, both that published in the mainstream clinical literature and that published by the voluntary sector, to try to understand service users’ experiences of health services, particularly focussing upon the experience of services in the first 48 hours of care after an episode of self-harm. We also present the findings of two focus groups and an interview with service users who have self-harmed, and the findings of a recent review of the literature regarding healthcare professionals’ attitudes to self-harm (Roy & House, 2003).

### 5.2 Methods

#### 5.2.1 Literature review

No existing review of this area was available. A total of 2,702 articles were downloaded from a search of the published literature, of which 23 were identified as relevant. A further 186 articles were sourced from a search of a ‘grey’ literature database (Sigle) of which four were considered relevant. In

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2 Details of the search strategy for this and other reviews in the guideline are available in Appendix 7. Information about each study along with an assessment of methodological quality is in Appendix 17, which also contains a list of excluded studies with reasons for exclusions.

3 Another four could not be obtained in time for this review (see Appendix 17).
addition, six voluntary organisations working with people who self-harm identified through an internet search and on the advice of the GDG responded to a request for unpublished primary material, generating a total of 33 studies. Studies were reviewed using predetermined inclusion criteria: 24 studies were therefore excluded, and nine were included in the final review (five sourced from databases of published literature, two from Sigle and two from unpublished reports from voluntary organisations), providing information from 218 participants.

All participants in the included studies had self-harmed, although the method of self-harm varied between studies as follows:

- Self-injury only (ARNOLD1995; BYWATERS2002)
- Self-injury and self-poisoning (DU ROSE2000)
- unclear about the method of self-harm (ANON2000, and HARRIS2000)

Studies also varied in the following ways:

- **Method of data collection**

- **Age of participants**
  Two studies were exclusively of young people (BURGESS1998, and DORER1999), whilst three (BYWATERS2002, CROCKWELL2001, and DUNLEAVEY1992) included adolescents in their samples. The remaining studies were of adults. None included elderly people.

- **Gender of participants**
  Three studies were of women only (ARNOLD1995, CROCKWELL2001, and HARRIS2000).

- **Timing of data collection**
Participants in half of the studies were recruited after a particular self-harm episode (ANON2000, BURGESS1998, DORER1999, and DUNLEAVEY1992).

5.2.2 Focus groups

Two focus groups were convened, one by the Central London branch of the Samaritans and the other by a self-help group based in Nottingham. Each approached people with a history of self-harm who were in contact with their services, and considered likely to be interested in taking part. People expressing an interest were given further information describing the purpose and methods of the study, the role of participants and the support to be offered for those agreeing to take part. Those who agreed to take part were required to complete a consent form (Appendix 13).

Focus groups were held in May and June 2003, facilitated by members of the GDG or review team (Marcia Kelson, Pamela Blackwood and Rebecca King). Eleven women, aged between 21 and 51 years, took part. One other volunteer agreed to be interviewed on a one-to-one basis.

The facilitators used a semi-structured questionnaire (Appendix 14), designed to help structure initial discussion, but allowing service users to introduce new topics as they wished. Discussions were audio-taped and transcribed, and the contents analysed thematically. Anonymised reports for both discussion groups can be seen in Appendix 15.

Service users’ recommendations to improve services and treatment for people who have self-harmed were also discussed in the discussion groups and interview; these are presented in the most appropriate category and have been used in generating recommendations by the GDG. These are presented in bold type. Quotations from the focus group and interview material are referenced ‘F’.

5.2.3 Analysis

The material was divided into categories based on the subject matter being discussed. Material from the literature review was combined with that from the focus groups, which also included the recommendations drawn up by each focus group.

5.3 Findings

5.3.1 Overview of the quality of services

In much of the material reviewed, including that from the focus groups, service users reported services to be of variable quality, including both good and bad experiences, although the focus tended to be on poor experiences.
This is borne out by those studies where the number of good and bad responses has been quantified. For example, in ARNOLD1995, of those who had used emergency departments, only 6% were satisfied with the service provided, and in DUROSE2000 six of the seven service users questioned found A&E to be the least useful source of support. However DORER1999 found that respondents equal numbers of positive, negative and neutral experiences (of hospital services), with around 44% of those admitted to hospital finding the experience positive. In ANON2000, 10/12 rated at least 1 service [not defined] ‘very good’ (for 2 people this was a service provided by a voluntary organisation).

5.3.2 Poor staff attitudes
It is clear from both the existing literature and the focus groups that users consider the main cause of their poor experiences of services to be staff attitudes towards people who self-harm and the generally low level of staff understanding of self-harming behaviour. For example, respondents in DUROSE2000 felt that A&E was the least useful source of support because staff there have punitive attitudes, lack understanding, and are rude and blaming. They do not treat people who self-harm seriously. This is supported by respondents in other studies:

‘[The nurse was] “pretty impatient with me”’ (ANON2000)

“My doctor was not understanding and told me off. He did not try to understand why I cut myself” (Respondent about GP, DUROSE2000)

“Doesn’t treat me like a normal [sic], as if I’m not normal because I self-harm, like there’s something wrong with my intelligence or something. Like a retard, I suppose. Because I self-harm, then obviously I’m thick.” (Respondent about his GP, BYWATERS2002)

“Got no help at all. All they wanted to do is pick on me like I was a naughty little girl, and it made me angry, and I couldn’t open up at all for how they treated me. I just dreaded going to see them.” (HARRIS2000)

“She said, ‘you are trying to disgust me.’” (F)

“…He doesn’t understand and like uses horrible words like ‘mutilation’” (F)

Not only do these kinds of attitudes make users experiences of services unpleasant, but they can also increase service users’ levels of distress. Indeed some service users felt this leads to further self-harm and to people treating their own wounds to avoid attending an emergency department (for example, HARRIS2000). Focus group respondents reported feeling even more distressed when they leave services as a result of the interactions they have had with staff. In particular, the isolation and humiliation that poor staff
attitudes lead to often encourages them to self-harm again as a way of coping with the distress or not to avoid services in future:

“... it made me even more and more distressed and I’ve actually felt like leaving the hospital and going and self-harming again because that’s the only way I can deal with the distress” (F)

“...even if my life was in danger... I’d rather sit at home and sit it out and see whether I’d survived than risk the humiliation.” (F)

Not only are service users critical of emergency department staff, but patients admitted to hospital following self-poisoning also feel isolated, ignored and inhibited by staff (DUNLEAVEY1992). This makes it hard to talk, although they wanted support (ibid.).

In the recommendations drawn up by the focus groups it was suggested that:

A fast tracking of service users through the system should be considered to minimise harm resulting from their injury and to minimise distress. In all cases staff should provide timely treatment and/or referral.

Liaison between A&E and psychiatric services should be available 24 hours a day.

Staff should not “write off” people who self-harm if they haven’t been able to meet their needs. It is important to understand that stopping self-harm behaviour isn’t a “cure”, exploring and coming to terms with the behaviour may be much more helpful to the individual.

5.3.3 Positive staff attitudes

Service users’ experiences of services are much more positive when they encounter staff with good attitudes who tried to understand self-harm behaviour. For example, the focus group respondents reported that their experiences were greatly improved when healthcare professionals showed them respect and were calm, reassuring and considerate. For example,

“My doctor shows me respect...the way he talks about me to this other professional...he is saying this persons ok... but I’m just so lucky to have a real good GP who can do that”. (F)

Service users appreciate tolerance and understanding, for example:

“He actually spoke to me, rather than talking down to me. He spoke to me like a person, instead of just a silly little girl, who cuts up and all this. He was different. Because a lot of GPs’ attitudes are “Oh, it’s nothing. You’ll get over it”. But he wasn’t. He was genuinely concerned, for a change, so it was nice” (respondent talking about his GP BYWATERS2002).
“My GP, who has admitted that he does not fully understand what self-harm is about, has however made himself available to me at any time and has been extremely supportive (i.e. I always get the last appointment so that he doesn’t have to rush the consultation and we have more time to discuss things)” (respondent about GP, DUROSE2000).

5.3.4 Being listened to and given time

Service users also point out the importance of being listened to by staff, even when only a one-off occasion or for a short period of time (ARNOLD1995), and of the importance of staff paying attention to, or talking about, the self-harm or suicide attempt or about mental state (ANON2000). The focus group respondents said that simply being listened to was important, although in their experience many staff did not listen and appeared to ask questions only to protect themselves in case the service user went on to die by suicide.

Focus group respondents reported that they appreciated healthcare professionals being willing to see them without an appointment and in giving them help, for example:

“… They helped me to write like a note and that to let my parents know what had happened…” (respondent about ambulance technician) (F)

5.3.5 Providing a safe environment

The importance of a safe environment is also highlighted, for example, respondents in DORER1999, who had been admitted to a ward after an overdose, appreciated friendly non-judgemental staff and the chance to rest and think things through with pressures removed. This is also borne out by the focus group respondents who said that their experiences of services improved when staff were non-judgemental, calming and able to provide a safe environment. They appreciated being treated with genuine care and respect by staff who tried to understand their behaviour by listening to them.

A safe environment and being listened to is especially important since service users may reveal information about their injuries that makes them feel vulnerable for fear of repercussions. This was highlighted by the focus group respondents, who reported feeling unable to be honest about the cause of their injury for fear of a staff member’s reaction, for example:

“I would like to go and know that I could be honest, but I wouldn’t want that to lead anywhere. It would take a lot of the anxiety away for me to be able to say yes I’ve done this, please help me sort it out and I’m going away… I know it’s a problem because it’s gone on so long I don’t need to be told that.” (F)

In the recommendations drawn up by the focus groups, respondents suggested that: [should these recommendations below be numbered?]
Staff should utilise their communication skills to ensure service users are respectfully listened to and that their needs are met through open and honest discussion.

Staff should be prepared to acknowledge and handle any distress, calming the situation, from the individual and manage their own personal feelings about the situation without compromising their professional role and responsibilities. The degree of injury is not necessarily an indicator of the level of distress the individual may be feeling.

When assessing the service user staff should not rely solely on risk assessment tools, it’s important to ask the individual and to let them explain in their own words.

Acute treatment should be available to service users without any longer term repercussions.

Staff should recognise that service users may or may not require referral to psychiatric services at the first contact with services following an episode of self-harm.

Staff should be aware that the individuals reasons for self-harming may be different on each occasion and therefore each episode needs to be treated in it’s own right.

5.3.6 Not being treated differently simply because injuries are self inflicted

As a result of poor staff attitudes towards people who self-harm, service users feel that they are frequently treated differently compared to service users who have not self-harmed (ANON2000). For example,

“I was told off by nurses and the doctors I just felt small. They do treat self-harmers different to accident people. We are classed as suicides…. The hospital staff just look at you as though you’re wasting time. That’s how I felt.” (HARRIS2000)

Being made to wait for longer than service users who had not self-harmed was a particular issue. For example:

‘As soon as they find out that I have mental health problems, I have to sit there, for hours sometimes, waiting for someone to look at me. It is horrible’. (F)

“They just say, ‘have you harmed yourself?’ as soon as you mention psychiatrists that’s it, they don’t want to know. I wait there hours and hours, and then when she comes, she tells them to dress it.” (F)

“People that self-harm, as well, also get left at A&E departments for hours and hours. You could sit there for eight, nine, ten hours for you to see a doctor, because they
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“...and I found it really difficult to be around people and so to be in that environment where there’s... lots of people milling about and there’s nurses coming flying and the doctors just walk through” (F)

In their recommendations they suggested that:

A quiet place should be available for service users to wait should they wish to do so.

Another issue highlighted by the focus group respondents was staff should consider the effect of the surroundings that service users were treated in, including being left alone. For example,

“Being left on your own is a dreadful thing.” (F)

“You’re left in there [alone] with drawers that say ‘scalpels’ on the outside!” (F)

“When you go into triage the door is always wide open and you’ve got a great queue of people and obviously they can hear what’s being said and you do feel as though you can’t say please shut the door” (F)

“He [Consultant in A&E] quizzed me quite a lot...in a cubicle with the curtains open so everybody was like walking passed and.. I’d cut myself” (F)

“(after stitching a wound) one called the other nurse over and said hey come and have a look at this...job I’ve done, oh that’s a really good job but it was really like...a bit degrading” (F)

Other areas where service users report inequity of treatment is in receiving unwanted treatment, being stitched without medication, and being refused medical treatment (DUROSE2000). For example:

“I was refused make-up to cover my scars because the doctor said they were self-inflicted” (DUROSE2000)

“Just wanted to have steristrips but ended up on antibiotics even though I get even more depressed on them and stitches and admitted to hospital” (DUROSE2000)

Focus group respondents also reported instances where staff coerced them into doing something that they did not want, for example:
“...A&E said they would only treat my injuries if I saw the duty psychiatrist ... after having several hospital admissions over a 2-week period I looked like a pin cushion, from various blood tests and drips. I was asked if I was an IV drug user, which I’m not. I wasn’t believed and they tested my urine. At the time I didn’t know they weren’t allowed to just test without my permission.” (F)

They also reported not being given analgesics in situations where other service users would be given them and described occasions where they did not receive adequate anaesthesia or were threatened with suturing without anaesthesia. For example,

“I said it hurts. They said, ‘well it didn’t hurt when you cut it.’” (F)

“Obviously you enjoy the pain, you know so so maybe you need stitching up without it” (F)

In their recommendations focus group respondents suggested that:

Service users have the right to be treated with dignity and respect and valued as human beings as are all service users using NHS services. They are therefore entitled to receive the relevant information, be consulted about their care and to be given choices and staff should offer privacy and maintain confidentiality.

Service users should always be informed of their rights and involved in decisions to detain them.

Under 18’s or under 16s: parents may have to be contacted but the young person should be informed of this situation and involved in any decision making about seeing their parents. On occasion it may be appropriate for staff to ask the service user whether they would like to invite someone other than a parent to provide support.

In wounds where suturing is required, adequate doses of anaesthesia should always be given and reviewed with the service users throughout the treatment process.

Service users should be assisted in making formal complaints in the event that service users or carers are unhappy with the services or treatment they have received.

5.3.7 Being involved in treatment decisions

Focus group respondents reported being coerced into having treatment despite having full capacity to make informed decisions. They were critical of staff not respecting their right to be informed about treatment:

“Maybe if they’d asked me...um I might even have said yes to a psychiatrist it’s the way it was done”.

Focus group respondents reported that they want to be involved in discussions regarding treatment – for example, the method of suturing used – and reported more positive experiences of wound care when staff had involved them in decision-making. Those who were able to care for their own wounds appreciated being prescribed steristrips by their GP. Some reported that a lack of control surrounding their treatment and care results in their feeling anxious, panicked and more likely to injure themselves again. For example,

“I need people to work with me…you know a partnership……..if my rights and everything’s taken away then I’m panic [sic] and I’m more likely to injure myself”.

In their recommendations, they suggested that:

**Staff should provide service users with the necessary information about the self-management of their injury/ wound and if prescribed medication the side effects that they might experience.**

Other respondents also highlighted the importance of staff working in partnership with service users in order to take service users’ wishes into account. For example:

‘The doctor was “OK, a reasonable man” and the social worker was “very good”. “She understood that I didn’t wish to be admitted… listened to my reasons for … overdose… and made effort [successfully] to liaise with day centre [which the interviewee was already attending].” (ANON2000)

This was supported by the focus group respondents who said that they found being referred without having the process explained to them resulted in a negative experience. They also reported that being unable to get appropriate referrals was stressful. In their recommendations they suggested that:

**Service users should be involved in discussions about their experiences and treatment and, in partnership with staff, can come to appropriate decisions if fully informed of the choices available. Choices include consideration of the treatment environment, gender of staff member, wound closure method and follow up services.**

**Staff should consult the service user as to how s/he wants to be treated, following advanced directives if available.**

It is totally unacceptable to use scare tactics (e.g. refusal to use anaesthetic or threaten service users with sectioning) or to “talk over” the service user to their friends/ family members or advocate if the person is conscious and has capacity.

**To aid in the smooth referral of service users between services, information gained at A&E should be passed on to the appropriate services to ensure**
continuity of care and avoid duplication of questions, which may cause additional unnecessary distress to the service user.

5.3.8 Carer support
Focus group respondents who wanted to be accompanied whilst waiting for treatment and during treatment by a friend, relative or advocate reported negative reactions from staff to their request:

“When I’ve taken someone … been told I was ‘involving them in my self-harm’.”

They included in their recommendations:

Staff should recognise the value for both the service user and staff in enabling friends, loved ones or chaperones accompany service users to appointments with staff and when receiving treatment. This can reduce the distress experienced by the service user and result in a more useful consultation.

5.3.9 Staff knowledge of self-harm
Respondents find that staff’s lack knowledge about self-harm can lead to their failing to listen to service users or address underlying issues. This can then lead to inappropriate or inadequate treatment (ARNOLD1995). This was supported by focus respondents who also reported frequently encountering staff who presumed they had made a suicide attempt, when they had not. These service users felt that staff lacked knowledge and training about self-harm.

In their recommendations focus group respondents suggested that:

Staff training should include, involvement of service users and local groups that work with them outside of NHS services.

Staff training should include:

- Involvement of service users and local groups that work with them outside of NHS services
- Help for staff in understanding the issues connected to self-harm (including the differences between suicide and self-harm, that self-harm isn’t simply attention seeking, the consequences of labelling and the use of language to describe people who self-harm).
- What is expected of staff
- Acknowledgement of the fears and prejudices that some staff may have.
• For non psychiatric staff, guidance in being able to talk about issues with the person who has self-harmed to enable them to make adequate decisions, in conjunction with the service user, about their care.

• The fact that individuals can and have made a difference to people who have self-harmed.

• Other sources of information for both staff and service users. This may include voluntary organisations.

In addition they suggested that:

**Staff should be trained not make assumptions about the circumstances surrounding the injury. Questions should be posed in a sensitive manner and can confirm for example whether the episode was an attempted suicide or an episode of self-harm and in the case of self-poisoning what substance has been ingested.**

**Greater awareness and understanding between various services needs to be encouraged and communicated to service users.**

**People managing services should recognise the need for training, support and supervision for staff who provide services to those who have self-harmed. This should include reception staff and non-psychiatric staff for example surgical wards that service users may be admitted to. This may mean the need for extra funding.**

**5.3.10 Summary of findings**

Although service users report both good and bad experiences with services, the emphasis is on negative experiences, largely resulting from poor staff attitudes and knowledge of self-harm behaviour. In particular, service users feel that they are not listened to nor given time by staff. They would like a safe environment, not just in which to wait for treatment, but also in the way staff treat them, for example, allowing them to explain their injuries without fear of being given or referred for treatment they do not want. They would like to be treated with the same respect and dignity given to other service users, for example, by not being made to wait for treatment longer than other users, by being given anaesthetic when being sutured and by being involved in all treatment decisions. They would also like to be consulted about having a relative, friend or advocate with them during treatment. They also made suggestions for staff training in order to help staff understand their needs more clearly.
5.4 Health professionals’ attitudes to self-harm

Service users are often aware of the negative attitudes held by health professionals towards self-harm. Roy and House (unpublished manuscript) have conducted a systematic review of the English language literature to identify what is known about the content and origins of these attitudes. Forty papers were identified, describing studies conducted since 1971.

5.4.1 Findings on negative attitudes

1.1.1.1 Attitudes to deliberate self-harm were more negative than attitudes towards other medical conditions (Barber et al. 1975, Creed & Pfeffer 1981, Goldney & Bottrill 1980, Patel 1975). Patients perceived as being seriously mentally ill and those suffering from painful, chronic illnesses were regarded less negatively, as were patients with high suicidal intent (Rund 1984).

1.1.1.2 Depressive motives were viewed as being more acceptable than ‘manipulative’ ones (Ramon et al. 1975) and accidental overdose patients were regarded more favourably than those who had intended to commit suicide (Ghodse 1978, Ghodse et al. 1986). Patients perceived as having no intention to die were viewed the most negatively (Ansel & McGee 1971).

1.1.1.3 People who harmed themselves repeatedly were viewed particularly negatively (Alston & Robinson 1992, Bailey 1994, Pallikkathayil & Morgan 1988).

1.1.1.4 Several authors commented on the tendency of staff to talk in stereotypes (DeRose & Page 1985, Jeffrey 1979, Ramon 1980). Patients were often thought of in stock categories such as ‘genuinely suicidal’, ‘mad’, ‘silly girls’, ‘chronically manipulative’ or ‘personality disordered’.

5.4.2 Consequences of negative attitudes

Strong emotions in staff may manifest themselves in a variety of ways. Staff anger can be expressed through diminished attention to pain and overall avoidance of self-harm patients. Conversely, some staff can respond with compensatory attentiveness and protection (Antonowicz et al. 1997). Inconsistency in behaviour can arise in staff trying to deal with negative attitudes to their patients - mixing distancing, irritation and aggression, interest and attempts to understand (Wolk-Wasserman, 1985). Some staff use self-care behaviours (e.g., taking a break, laughing, having a co-worker take over) to protect themselves from emotional turmoil and release tension, and they deal with feelings of anger and judgmental thoughts toward the suicide attempter by behaving in a detached manner (Pallikkathayil & Morgan 1988).
5.4.3 Reasons for negative attitudes

A suicidal patient may be viewed by staff as a challenge to their professional identity (Wolk-Wasserman 1985) and as a potential threat to self-esteem, with the fear that subsequent suicide may be taken as an indication of professional incompetence (Ansel & McGee 1971). Several papers refer to countertransference hate or countertransference crisis (Tabachnick 1961, Wolk-Wasserman 1987, Maltsburger & Buie 1974), suggesting that negative reactions on the part of the health professional may be the result of neurotic conflict leading to rejection of the patient.

5.4.4 Summary

Much of the existing research on staff attitudes to self-harm employs over-structured measures (e.g., semantic differentials, repertory grids and mood adjective checklists), which require respondents to endorse or generate global judgements. Few of the studies include interviews, and where they do, there is rarely any formal qualitative analysis that would allow more complex themes to emerge. Nevertheless, what research is available does confirm the negative and often punitive attitudes of NHS staff to people who self-harm, and suggests that there are some fundamental emotional difficulties for staff when faced with self-harm.

5.5 Clinical practice recommendations

The clinical practice recommendations are ordered according to the ‘care pathway’ normally experienced in emergency departments. However, most of the recommendations can be applied to any treatment or assessment situation involving a person who has self-harmed.

5.5.1 General principles

5.5.1.1 People who have self-harmed should be treated with the same care and respect as any patient. In addition, healthcare professionals should take full account of the likely distress associated with self-harm. [GPP]

5.5.1.2 When caring for people who repeatedly self-harm, staff should be aware that the individual’s reasons for self-harming may be different on each occasion and therefore each episode needs to be treated in its own right. (GPP)

5.5.1.3 Staff should involve people who self-harm in all discussions and decision-making about their treatment and subsequent care. To do this, staff should provide the person with full information about the care options. (GPP)
5.5.1.4 People who self-harm should be allowed, if they wish, to be accompanied by a family member, friend or advocate during assessment and initial treatment. (GPP)

5.5.2 Assessment and evaluation

5.5.2.1 When assessing people who self-harm, staff should ask service users to explain their feelings and understanding of the self-harm in their own words. (GPP)

5.5.2.2 Staff responsible for triage should take account of the underlying emotional distress, which may not be outwardly exhibited, as well as the severity of injury when making decisions about priority for treatment. (GPP)

5.5.3 Waiting for treatment

5.5.3.1 If a person has to wait for treatment, her or she should be offered an environment which is safe, supportive and minimises their distress. For many patients, this may be a separate quiet room with supervision and contact to ensure safety. (GPP)

5.5.4 The physical treatment of self-harm

5.5.4.1 People should be offered treatment for the physical consequences of self-harm, regardless of their willingness to accept psychosocial assessment or psychiatric treatment. (GPP)

5.5.4.2 Adequate anaesthesia should be offered to people throughout the process of suturing. (GPP)

5.5.5 Post-care services and information

5.5.5.1 Staff should provide appropriate written information, which might include details of local services, self-help groups and harm minimisation. (GPP)

5.5.6 Staff training and the organization of services

5.5.6.1 Clinical and non-clinical staff who have contact with people who self-harm should be provided with appropriate training to equip them to understand and care for people who have self-harmed. (C)

5.5.6.2 People who self-harm should be involved in the planning and delivery of training for staff. (GPP)
5.5.6.3 Strategic health authorities should ensure that people who self-harm are involved in the commissioning, planning and evaluation of services for people who self-harm (GPP)

5.6 Research recommendations

5.6.1.1 A study using an appropriate and rigorously applied qualitative methodology should be undertaken to explore user experiences of services.

5.6.1.2 Qualitative research methods, such as Q sort (Stainton Rogers 1995) and Interpretive Phenomenological Analysis (Smith et al. 1999), should be used to better understand staff attitudes to self-harm and their psychological and social origins.
6 Consent

Staff often face difficult decisions about whether they should intervene to provide treatment and care to a person who self-harmed and then refuses help. This might happen when a person refuses to be conveyed to A & E by ambulance, indicates a wish to leave A & E before a full assessment has been made or refuses treatment for the physical effects of self-injury. Not only are these decisions difficult but they can provoke disagreements between staff who may interpret differently the legal framework that underpins them (Hassan et al., 1999 and subsequent correspondence). The Department of Health’s Reference Guide to Consent for Examination or Treatment has helped to clarify the issues involved (Department of Health 2001).

The guideline cannot offer specific advice about every possible scenario but can give general guidance that, if applied, should allow staff to reach a decision that both ensures that the best interests of the patient are served and that the actions of staff are defensible if subsequently challenged.

6.1 Capacity

The concept of mental capacity is central to determining whether treatment and care can be given to a person who refuses it. Box 6 sets out the test of mental capacity that has been established by the judges.

Box 6

A person lacks capacity if some impairment or disturbance of mental functioning renders the person unable to make a decision whether to consent or refuse treatment. The inability to make a decision will occur when:

1. the patient is unable to comprehend and retain the information which is material to the decision, especially as to the likely consequences of having or not having the treatment;
2. the patient is unable to use the information and weigh it in the balance as part of the process of arriving at a decision.

(Re MB [1997] EWCA Civ 1361 (26th March 1997))

The test requires that the person has received sufficient information about the seriousness and nature of the problems associated with the self-harm in a form that he/she could be expected to understand.

A person may be mentally incapable to make the decision in question because of either a long-term mental disability or because of temporary factors such as
unconsciousness, confusion or the effects of fatigue, shock, pain, anxiety, anger, alcohol or drugs.

If a person is mentally capable of making the decision, then his or her decision about whether to receive treatment or care must be respected; even if a refusal may risk permanent injury to that person’s health or even lead to premature death. (unless he or she is mentally disordered and can be treated under the Mental Health Act – see below).

If a person is assessed as being mentally incapable, the common law doctrine of necessity will apply and staff must act in the person’s best interests in a manner that is consistent with good medical practice. The doctrine of necessity could provide authority for conveying the person to hospital even if he or she is unwilling to being taken to the hospital, detaining him/her for the purposes of medical assessment and administering medical or surgical treatment to him/her. Staff can use reasonable force to ensure that the person receives the treatment that is deemed to be in his/her best interests. However, when a mentally incapacitated person is actively opposed to the course of action favoured by staff, the benefits which it holds for the person will have to be carefully weighed against the disadvantages of going against his or her wishes; especially if force is required to do this. If a mentally incapable person appears to be mentally disordered, and that disorder needs to be assessed, the Mental Health Act should be used if that person is unwilling to be taken to hospital or to accept necessary care; see below.

Staff faced with a refusal of consent must consider carefully both the patient’s mental capacity at the time when the decision is made and the possible consequences of the decision. It may not be a question of capacity or no capacity. It may be a case of reduced capacity. Refusals can vary in importance. Some may involve a risk to life or of irreparable damage to health; others may not. What matters is whether, at that time, the patient’s capacity is reduced below the level needed in a case of refusals of that importance. If there is uncertainty as to the consequences of the act of self-harm, then it should be assumed that the consequences will be serious.

If the mental capacity of a person who has self-harmed has been impaired by the effects of alcohol or drugs, or by that person’s emotional distress, staff must be satisfied that these temporary factors are operating to such a degree that the assumption of mental capacity is overridden. If a person appears to be calm but refuses potentially life-saving treatment, or expresses the wish to die by suicide, the assumption of capacity could be rebutted by evidence that the person does not truly comprehend the consequences of his or her decision, that the person is acting under the undue influence of another, that the person’s emotional distress associated with the stated reason for wishing to be dead is impairing his or her judgement or that the person’s behaviour shows that he or she is deeply ambivalent about the decision (for example if the person initially sought help for the effects of the self-harm).
6.2 Who should assess capacity?

All staff who have emergency contact with people who have self-harmed should understand the test of capacity and know how to apply it to make decisions about when treatment and care can be given without consent. This is because they might have to act in situations where senior medical staff are not immediately available (see vignettes below). However, whenever possible, experienced medical staff (e.g., GPs, senior A&E doctors) should be involved in these decisions. In difficult cases, or where a mental illness is suspected, advice should be sought from a psychiatrist who is approved under section 12 of the Mental Health Act.

6.3 The role of the Mental Health Act

The fact that a person has a mental disorder is not sufficient to override the assumption of mental capacity. However, a mentally capable person who suffers from a mental disorder could be detained under the Mental Health Act if the relevant criteria under that Act are satisfied. The Court of Appeal has held that the compulsory treatment for the mental disorder of a person who has been detained under section 2 or 3 of the Act can involve treatment for the consequences of the mental disorder and for the symptoms of the disorder (B. v. Croydon Health Authority [1995] 1 All E.R. 687). In this case, one of the judges ruled that “it would seem strange to me if a hospital could, without the patient’s consent, give him treatment directed at alleviating a…. disorder showing itself in suicidal tendencies, but not without such consent be able to treat the consequences of a suicide attempt. In my judgment the term 'medical treatment for mental disorder' in s.63 includes such ancillary acts”. Compulsory treatment can therefore include medical and surgical treatment for the physical consequences of self-poisoning or self-injury if the self-poisoning or self-injury can be categorised as either the consequence of or a symptom of the patient’s mental disorder.

Intoxication alone cannot be grounds for making an application under the Mental Health Act. Furthermore, a proper assessment cannot be made under the Mental Health Act if a person is intoxicated. In this situation, necessary treatment and care can be given under the common law on the grounds that the person is mentally incapacitated. A Mental Health Act assessment can proceed when the person's mental abilities are no longer impaired by alcohol or drugs. If a person attempts to abscond before a Mental Health Act assessment can be completed, and staff believe that the person is about to harm him or herself or to attempt suicide, the common law provides staff with the power to detain that person until the assessment has been completed.

6.4 Young people

Mentally capable young people aged 16 and 17 have the same right to consent to medical treatment as adults. However, a refusal of a 16 or 17 year old to
either receive treatment or to enter hospital can be overridden by a person or body that has parental responsibility for the young person. A child under the age of 16 has a right to consent to treatment if he or she is assessed as being mentally competent. If such a child lacks mental capacity, the consent of a person or body that has parental responsibility for that child should be obtained before treatment is given. In exceptional cases, where the doctor believes the treatment to be vital to the survival or health of a child, emergency treatment can be given in the face of parental opposition. The Court’s decision is determinative in cases where there is disagreement between parents and doctors.

6.5 Putting these principles into practice

Flowchart 2 shows an algorithm intended to support decision-making. When considering the algorithm, it should be noted that:

• the person must be given full information about the nature of the proposed intervention and the likely consequences if the intervention is not undertaken;

• staff should make concerted and repeated attempts to gain consent throughout the process of assessment and treatment;

• attempts to gain consent should not be coercive eg. threats to use the Mental Health Act if the person refuses;

• every effort should be made to involve family members and friends in the decision. Staff must decide whether the risk to life is such that an informant interview is necessary in the event of the patient refusing permission.

A few brief vignettes are given to illustrate the types of situation that might occur and how the algorithm might guide.

A 23-year old man is accompanied to the emergency department by a friend who reports that he has taken an unknown number of paracetamol tablets. Shortly after arrival, the man states that he is going to leave. The triage nurse explains the potential dangers of paracetamol poisoning, but cannot persuade him to stay. The accompanying friend tells the triage nurse that the man has been drinking heavily and the nurse notices his speech is slurred and that he is unsteady on his feet.
Person refuses treatment or care*

Assess and record the person's capacity

Consider:
- Long-term mental disability
- Temporary factors e.g. pain, fatigue, confusion, distress, anxiety, anger, alcohol, drugs

Has insufficient capacity

Benefits of intervention outweigh consequence of not intervening

Consider:
- How serious are the consequences of the refusal? (assume severe if uncertain)

Benefits of intervention do not outweigh consequence of not intervening

Intervene under Common Law

Record:
- Information provided
- Efforts to persuade
- Alternatives considered
- Person's decision
- Give service user opportunity to record their experiences
- Other actions taken, e.g., GP informed

When considering the algorithm, it should be noted that:
- The person must be given full information about the nature of the proposed intervention and the likely consequences if the intervention is not undertaken;
- Staff should make concerted and repeated attempts to gain consent throughout the process of assessment and treatment;
- Attempts to gain consent should not be coercive e.g. threats to use the Mental Health Act if the person refuses;
- Within the bounds of patient confidentiality, every effort should be made to involve family members and friends in the decision.

Debrief – give the Service User an early opportunity to discuss the experience and provide clear explanation of decision to intervene under the common law.

Consider: does the person meet criteria for detention under the Mental Health Act?

Has sufficient capacity

Intervene under the Mental Health Act

Does not meet criteria for detention under the Mental Health Act

Meets criteria for detention under the Mental Health Act

Assess and record the person's capacity

Person refuses care or treatment

Flowchart 2 Decision-making algorithm
The assessment of the triage nurse is that the man has reduced capacity as a consequence of alcohol. She also decides that, with the uncertainty about how much paracetamol has been taken, the chances of the man suffering severe consequences are high. The emergency doctor confirms this view and, having considered the intoxication of the patient and the consequences of non-intervention, concludes that the patient does not possess the level of capacity required for a decision of that importance. It is decided that the man should remain until a blood sample has been taken and tested. The man is held under the common law and the security guards are asked to prevent him leaving. Although continuing to express his refusal, the presence of the security guards cause the man to remain in the assessment area and blood is taken without him having given consent. What would happen if the man refuses to allow bloods been taken? Can under common law he be coerced into giving blood?

A 19-year old woman comes to the emergency department having cut her arm with a knife. The wound is two-inches long and would benefit from closure; however, no underlying structures have been damaged. The department is very busy and, at triage, the woman is assigned a low priority. After waiting for three hours the woman tells the triage nurse that she is not prepared to wait any longer and is going to leave immediately. Angry and distressed at being kept waiting, the woman refuses a belated offer of immediate treatment for her wound. The triage nurse has already ascertained that the woman cut herself to relieve stress and that this is something that has happened before. The self-harm was not an attempt to kill herself and the woman is not expressing suicidal intent.

The woman is allowed to leave. Although she is distressed, and this might be affecting her judgment and therefore her decision not to have treatment, the staff decide that the consequences of the wound not being closed (the risk of an unsightly scar) are not sufficiently severe to warrant keeping the woman in A&E against her will.

A woman phones the emergency ambulance service at 9 p.m.. When the ambulance crew arrive at her home, the woman tells them that she thinks that her partner, a man in his 30s, has taken an overdose of tablets after she told him that she intended to end their relationship. The man is locked in the bathroom and tells the ambulance crew that he is not prepared to see them or to go to hospital. He sounds distressed and angry and he refuses to say what tablets he has taken. The man’s partner saw him open a bottle containing sixty 75mg amitriptyline tablets, that had been prescribed for her, but did not see whether he had swallowed any before locking himself in the bathroom. The woman reports that the man has no recent history of mental illness.

From the information available, the ambulance crew suspect that that the man’s capacity is reduced by virtue of his distress and anger. The wife’s account of events also lead them to believe that there is a substantial likelihood that he has taken an overdose that is potentially fatal. After failing to persuade the man to open the door, they call for assistance from the police.
who, acting under common law, force the bathroom door. The man is drowsy and slumped on the floor beside the empty pill bottle. The police escort the man in the ambulance to A&E.

In this situation, the ambulance crew might also have called for the advice of a psychiatrist. If the psychiatrist is unable to get there immediately, the ambulance crew could at least have discussed the assessment of capacity.

A 55 year-old woman is brought to the emergency department by her community psychiatric nurse. That morning, the woman’s husband had entered a room to discover that his wife had just taken a large quantity of her antidepressant tablets. He had immediately phoned his wife’s CPN who visited straight away because it was clear that the woman would not agree to go to hospital. The CPN was able to persuade the woman to go with her. When assessed by the casualty officer, the woman is fully conscious, calm and fully understands the doctor’s explanations about the likely fatal consequences of the overdose, if left untreated. She refuses to accept treatment. She states that she had planned the overdose some weeks ago, that she had not intended to be discovered by her husband until she was dead. She wishes to die because she believes that she has become an intolerable burden on her family.

The casualty officer concludes that the woman does not have reduced capacity but suspects that she may have a mental disorder. He asks for an urgent assessment under the Mental Health Act. The psychiatrist, her GP and a social worker conclude that she is suffering from a depressive illness and that she meets criteria for detention under the Mental Health Act. Her fixed belief that she has become an intolerable burden is judged to be a symptom of the depression. She is given life-saving treatment for the physical effects of the overdose on the grounds that the self-poisoning is a consequence of her mental illness and so can be treated under the Mental Health Act. After a short stay on a medical ward is transferred to a psychiatric ward for treatment of her depression.

### 6.6 Clinical practice recommendations

6.6.1.1 All staff who have contact, in the emergency situation, with people who have self-harmed must understand that capacity should be assumed unless there is evidence to the contrary. They should know how to test for capacity and how to make decisions about when treatment and care can be given without consent. [GPP]

6.6.1.2 Staff should give full information and make all efforts necessary to ensure that someone who has self-harmed can give, and has the opportunity to give, meaningful and informed consent before
any procedure (eg conveyance to hospital) or treatment is initiated. [GPP]

6.6.1.3 Ambulance staff, triage nurses and emergency department medical staff should assess and document mental capacity as part of the routine assessment of people who have self-harmed. Staff should attempt to obtain relevant information from relatives, friends, carers and other key informants to inform the assessment. [GPP]

6.6.1.4 If a person is assessed as being mentally incapable, staff have a responsibility to act in that person’s best interests. If necessary this can include conveyance to hospital, detaining to allow assessment and treating against the person’s stated wishes. [GPP]

6.6.1.5 Staff should take into account that a person’s capacity to make informed decisions may change over time. Whether it has been possible to obtain consent or not, attempts should be made to explain each new treatment or procedure and obtain consent before it is initiated. [GPP]

6.6.1.6 Psychiatrists should understand when and how the Mental Health Act can be used to treat the physical consequences of self-harm. [GPP]

6.6.1.7 Staff who have emergency contact with children and young people who have self-harmed must understand how issues of capacity and consent apply to this group. [GPP]
7 The medical and surgical care of people who have self-harmed

7.1 Introduction

Although the majority of episodes of self-harm never reach the health service (Hawton et al., 2002), self-harm nevertheless represents a significant part of the work of healthcare workers in community, primary and secondary services. For example, people who have self-harmed represent 4% to 5% of all attendances at emergency departments (BAEM, unpublished), with self-harm being one of the top five causes of acute medical and surgical admission in the UK (Hawton & Fagg, 1992; Gunnell et al., 1996). In addition, of about 40,000 responses to calls regarding mental health by the London Ambulance Services in a year, nearly 20,000 will be related to an act of self-harm.

Although an estimated 92% of people who present to statutory services following an episode of self-harm attend emergency departments, around 4% of people present initially at general practice surgeries, 3% to mental health services and 0.5% to social services (Crawford & Wessely, 1998). This chapter therefore considers the initial care of people who have self-harmed, focusing on those presenting to emergency departments, but also considering the response of primary care and ambulance services.

Poisoning and cutting represents the bulk of all acts of self-harm presenting to emergency departments and have a number of established treatments which are considered in this chapter. With regard to the treatment of self-cutting, the guideline addresses only methods of wound closure for superficial uncomplicated wounds, as more complicated injuries may require surgical exploration and a more complex and individual response. Moreover, a considerable proportion of the people who contact the NHS following self-cutting will present with one or more superficial wounds, and can be physically treated relatively quickly, although it is uncertain as to which methods of wound closure are the most effective and acceptable. Where other specific treatment is indicated, normal good medical practice should be used (e.g., in the use of antibiotics for the treatment of secondary infection and the surgical repair of damaged arteries, tendons and/or nerves).

7.1.1 What this chapter considers

This chapter considers:

- The management of self-harm in primary care
- The management of self-harm by ambulance staff
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- Information and laboratory services available to clinicians treating self-poisoning
- The role of triage in the management of self-harm in emergency departments
- Screening for paracetamol overdose in emergency departments
- The treatment and management of self-poisoning by gut decontamination
- Treatment and management of paracetamol overdose
- The use of flumazenil in the treatment and management of benzodiazepine overdose
- Treatment and management of opioid overdose
- The treatment and management of superficial wounds

For the treatment of poisoning not covered in this guideline, clinicians should consult with their local toxicology department, TOXBASE and/or the NPIS.

7.1.2 Clinical recommendations

7.1.2.1 For the specific management and treatment of overdose with substances not covered in this guideline, clinicians should consult with their local toxicology department, TOXBASE or discussing the individual case with the NPIS. [GPP]

7.2 The management of self-harm in primary care

7.2.1 Introduction
Any member of the primary care team may need to deal with someone who has self-harmed including general practice reception staff, practice nurses and general practitioners, community nurses, health visitors, midwives, and staff in out-of-hours services, deputising services and community hospitals. There is therefore a wide diversity of primary healthcare professionals in a variety of settings who need to know how to manage self-harm within that setting. In addition, as many cases go unrecognised – for example, minor injuries that have initially been self-treated by the patient – and may not be seen for what they are unless the health professional is alert to the possibility.
7.2.2 Management

The management of self-harm in primary care depends on a variety of factors such as location of the primary care practice, the experience of the healthcare professional involved and how well the patient is known to them. However, there are some basic guiding principles that should apply in all cases.

The principles of early assessment of physical risk, cognitive function and mental capacity, the level of distress and the likelihood of service users leaving the treatment setting before adequate physical treatment or psychosocial assessment, as outlined in Chapter 8 on psychosocial assessment, also apply in primary care.

Differences in management between primary care and other settings mainly relate to the management of people who self-injure, and especially those people who have an established relationship with primary care providers who prefer to receive treatment for self-injuries within primary care.

The management of self-harm falls under three headings:

- Assessment
- Referral
- Treatment

1.1.1.5 Assessment and referral

Initial assessment of a person who has self-harmed and presents to primary, will seek to establish the immediate physical risks to the person. If a person has self-poisoned, immediate referral to the nearest emergency department should be arranged and activated charcoal offered at the earliest opportunity and within 2 hours of ingestion. Occasionally, a person will present following a trivial overdose, in which case referral to the emergency department may not be necessary. In these circumstances considerable caution should be exercised as many people who self-harm may not know exactly what, or indeed how much, of the poison they have ingested, while others may not feel that they can be honest about the nature and quantity of the poison. This may be for a number of reasons. For example, they may feel ashamed; or they might be worried about the professional’s reactions; because they still want to kill themselves; or because they feel unsure about whether they want help.

When a person who has self-injured and expresses a preference for physical treatment in primary care without referral to the emergency department, this should be supported if primary healthcare practitioners have the facilities and training to provide such treatment. If there is any suggestion of concurrent covert self-poisoning urgent referral should be offered.
In any event, assessment of the person’s mental capacity and cognitive function should be undertaken. Evidence of diminished cognitive function indicates urgent referral to the nearest emergency department.

All people who have self-harmed must be assessed for the risk of repetition of self-harm and of suicide in the same way as outlined in the chapter on assessment (see Chapter 8), including the identification of mental illness, especially depression, and evidence of hopelessness and continuing suicidal intent. Initial assessment must also recognise the individual circumstances that apply to the particular episode of self-harm. However well known the patient may be to the healthcare professional and even if this is one of many episodes of self-harm, it is essential that it is recognised that self-harm can occur for different reasons on separate occasions in any individual and that careful assessment of the circumstances on that occasion must not make assumptions based simply on previous history. Each episode, whether a first episode or one of many, requires the same attention and needs to be addressed with the same degree of respect and consideration for the individual who has self-harmed.

An holistic approach to initial assessment is appropriate with the immediate physical and psychological needs of the patient being assessed within the social context. If referral to the emergency department is considered unnecessary, or indeed potentially harmful (such as when previous experience has been unpleasant and frightening), a comprehensive needs assessment should be undertaken, including psychiatric, psychological and social needs, as well as an assessment of the motivation behind the act of self-harm. Referral to psychiatric services should be based upon the assessment of risk and need, although the presence of mental illness or diminished mental capacity should suggest an urgent psychiatrist assessment.

If the initial full psychological assessment is undertaken in primary care, it must be undertaken with the same rigour by an individual with the same level of expertise as in the secondary care setting. If there is any doubt about the seriousness of the incident, urgent referral to secondary care probably via Accident and Emergency for the management of the physical aspects is appropriate.

In all cases the wishes of the service user should be taken into account and if possible, depending upon the facilities and skills available in a primary healthcare setting, the wishes of the patient about who cares for them should be followed, as long as this does not significantly increase the risks to the service user. This, for example, may be particularly important for people who have self-harmed repeatedly and where the individual has had a bad experience in the way in which they have been dealt with and so may have lost faith in the services provided in a particular setting.
When the initial physical injuries are dealt with in a primary care setting, there may still be a need to consider referral to secondary care for further assessment and treatment of psychological needs. In the majority of cases, early referral will be appropriate. It should be remembered that severity or seeming triviality of the physical aspects of an episode of self-harm do not necessarily correlate with the degree of psychological problem or hurt.

Consideration should also be given to whether the patient poses a further risk to themselves during transportation and what, if any, level of supervision is appropriate when referring for further assessment, treatment or care. If there is reasonable risk of additional or exacerbated injuries, it may be appropriate to arrange ambulance transportation. Current practices of referral should continue, ensuring a full clinical handover to the receiving organisation, including the sharing of relevant past history that may affect the current decisions concerning any presenting crisis.

1.1.1.6 Treatment

Any initial treatment in primary care should first and foremost take into account the level of experience and expertise of the primary care clinician. Other factors that need to be taken into account will be the setting and time of day. It may be appropriate to undertake treatment of wounds in a community hospital setting in a rural location distant from an emergency department that would be inappropriate in a town surgery.

- In all cases of self-harm presenting for treatment in primary, it is important to recognise the need of the patient to receive appropriate treatment acknowledging their views and offering dignity and respect
- Err on the side of caution and refer the majority of cases for management by secondary care
- Be aware of the limitations of a generalist dealing with what can be complex issues
- Acknowledge that there is a need to overcome any prejudicial beliefs when dealing with self-harm.
- Communicate self-harm episodes to other organisations that hold a current care plan for the patient.

7.2.3 Clinical practice recommendations

7.2.3.1 Following an episode of self-harm presenting in primary care, healthcare workers should establish the likely physical risk, and
undertake a full assessment including physical, psychological and social needs in an atmosphere of respect and understanding. [GPP]

7.2.3.2 In the assessment and management of self-injury in primary care, health care workers should refer service users for urgent treatment in an emergency department if assessment suggests there is a significant risk to the individual who has self-harmed. [GPP]

7.2.3.3 All people who have self-poisoned and present to primary care should be urgently referred to the nearest emergency department, especially in view of the fact that the nature and quantity of the ingested substances may not be clearly known to the person who has self-poisoned. (GPP)

7.2.3.4 For people who have self-poisoned and present to primary care within two hours of ingestion, healthcare practitioners should consider offering activated charcoal if the person is fully conscious and able to protect his or her own airway, at the same time as referral to the emergency department. (A)

7.2.3.5 All people who have self-harmed should be assessed for risk, which should include identification of the main clinical and demographic features, and psychological characteristics known to be associated with risk, in particular depression, hopelessness and continuing suicidal intent. (C)

7.2.3.6 If urgent referral to an emergency department is not considered necessary for people who have self-harmed in primary care, a full psychological and social assessment should be undertaken to identify the need for urgent referral to secondary mental health services. (GPP)

7.2.3.7 Assessment of needs should be comprehensive and include evaluation of the social, psychological and motivational factors specific to the act of self-harm, current intent and hopelessness, as well as a full mental health and social needs assessment. (C)

7.2.3.8 Healthcare practitioners who may have to assess and/or treat people who have self-harmed should ensure that they are properly trained and competent to undertake assessment and treatment as necessary. (GPP)

7.2.3.9 Consideration should be given to the patient’s welfare during transportation to any referral organisation and if necessary, this should be supervised by an appropriate person where there is a risk of further harm or reluctance to attend other care centres. (GPP)
7.2.3.10 Following assessment and treatment of self-harm in primary care, the outcome of the risk and needs assessment, and full details of the treatment provided, should be forwarded to the appropriate secondary mental health team at the earliest opportunity. (GPP)

7.3 The management of self-harm by ambulance staff

7.3.1 Introduction

Self-harm accounts for a significant proportion of emergency calls (i.e., 999 calls) to NHS ambulance trusts. In the three-month period between March 2002 and May 2002 the London Ambulance Service (NHS Trust) responded to 4,452 calls related to self-harm, which accounts for nearly a half of all psychiatric-related emergency activity. Calls originate both from people who have harmed themselves and, more often, from concerned family or friends. The severity of such incidents ranges from minor physical injuries to life-threatening conditions.

The nature of self-harm also varies, including both self-poisoning and self-injury, with the London Ambulance Service receiving five times as many calls for drug overdoses compared to non-accidental self-inflicted external injuries. Although general emergency call demand through the 999 system tends to peak around mid-day, calls relating to self-harm peak later at around 8 pm, with approximately 63% of such calls being made between 5 pm and 9 am. This indicates a reliance on the emergency ambulance trusts to provide intervention and care out of hours, and may reflect the need for other care providers to provide similarly planned resources during this time.

Many patients attended by ambulance staff state that they have had no contact with mental health services previously, indicating that ambulance trusts may frequently be the entry point for people experiencing their first crisis.

Early intervention in the pre-hospital environment may avoid further physical harm to patients. Historically, ambulance staff have stabilised injuries to prevent further deterioration and promote recovery in the patient’s condition, providing care and treatment before arrival at A&E. Increasing skills and knowledge suggests that ambulance staff may now contribute more fully to patient care in situations of self-harm.

In situations where emergency calls are made by friends or family, a significant proportion of people who have self-harmed are unwilling to attend the emergency department. Whilst ambulance staff employ their powers of persuasion in such instances, they have no automatic right to remove patients against their will. Ambulance staff are increasingly familiar with the requirement of consent and the need for patients to have mental capacity, however, the absence of this does not allow the imposition of care unless the
situation is deemed a significant threat to life or limb (Dimond, 1994). Whilst it is reasonable to expect ambulance staff to act in clear situations where there is a lack of capacity, there are many situations where assessment by a more qualified practitioner is required. This may delay definitive physical treatment to the detriment of the service user. In this event, rapid access to a psychiatrist skilled in the assessment of mental capacity, even by telephone, is not normally available to ambulance staff at the present time. Similarly, it is vital that ambulance staff understand the need for information to be provided to the patient regarding the potential consequences of not receiving treatment when attempting to gain valid consent.

Often patients travel to hospital unaccompanied, or have little or no support at home. Ambulance staff often may therefore be able to provide an insight into the patient’s living environment, social and family support network and history leading up to the self-harm event. In addition, the patient’s initial emotional state may differ from initial presentation to ambulance staff compared to presentation at an emergency department.

Normally, ambulance staff take service users to the nearest accident and emergency unit. However, sometimes patients prefer to be treated elsewhere, possibly due to previous bad experiences or because they are known by staff at another hospital and would prefer continuity of care. Sometimes the injuries caused by self-harm do not warrant treatment at an emergency department, although emotional and mental health problems, or a high level of continuing risk, persist, service users may be helped by attending a specialist mental health centre instead.

Increasingly, acute trusts are specialising in areas of care whereas other local trusts prefer not to offer certain services. On occasions, patients arrive at emergency departments by ambulance with non-life-threatening conditions, including those resulting from self-harm, only to be transferred subsequently to another specialist unit because ambulance staff were not aware of changes in hospital policy or the provision of hospital services.

7.3.2 Treatment of overdose by ambulance staff
Sometimes, ambulance staff may need to initiate treatment before a person who has self-harmed has reached the emergency department. This is particularly likely if the person has taken an overdose. Guidance for ambulance staff to administer drugs are contained within the Ambulance Pre-Hospital Guidelines (JRCALC, 2002), adopted by all ambulance trusts in the U.K., and these guidelines provide definitive advice and guidance to ambulance staff. In cases of overdose, it is recommended that authorised ambulance staff consider the appropriate early use of naloxone hydrochloride, atropine and activated charcoal. Current methods of administration routes are also contained within the national guidelines. The early administration of
activated charcoal following self-poisoning, and the use of naloxone in opiate overdose, are reviewed later in this chapter.

In cases of opioid overdose, or in the unconscious patient where this is a possibility, naloxone hydrochloride should be administered at the earliest opportunity. Whenever possible, naloxone hydrochloride should be given I.V. In addition, in cases of adult cardiac arrest or extreme respiratory depression, JRCALC (2002) advise that 400 micrograms of naloxone hydrochloride be administered by I.V. bolus and repeated every two to three minutes until an effect is noted to a maximum of 10mg. In cases of respiratory depression, 800micrograms of naloxone hydrochloride may be diluted to a total of 10 ml and be given I.V. titrating the dose given against the clinical response. In the case of children, 10micrograms/kg I.V. or I.M. should be given, again monitoring the response, and a further one dose of 100micrograms if no response is forthcoming. Neonatal should be given 100 micrograms I.M. only.

7.3.3 Clinical practice recommendations

7.3.3.1 Ambulance staff should be given effective support, including the provision of telephone advice regarding the assessment of mental capacity and the possible use of the Mental Health Act, from crisis resolution teams and section 12 approved doctors, to assist in the urgent assessment of people who have self-harmed and who may be unwilling to accept further treatment and may have impaired mental capacity, or who may be mentally ill. PCTs, mental health trusts and ambulance services should consider supporting the formal development of such a service. (GPP)

7.3.3.2 When people who have self-harmed are considering refusing further treatment, ambulance staff should provide information about the potential consequences of not receiving treatment when attempting to gain valid consent. [GPP]

7.3.3.3 Ambulance staff should be trained in the assessment and early management of self-harm, including training regarding the different methods, the likely effects if untreated, and the optimal treatments, of each form of self-harm. (GPP)

7.3.3.4 Ambulance Trusts should ensure that systems are in place to provide staff with additional information from toxicology laboratories and through TOXBASE at the scene of an emergency call to help to prevent unnecessary delay in conveying patients to the most appropriate clinical service. (GPP)
7.3.3.5 Ambulance staff should record all information about the service user’s home environment, social and family support network, and history leading to self-harm, as well as the service user’s initial emotional state and level of distress. This information should be passed to emergency department staff. (GPP)

7.3.3.6 In cases of self-poisoning, ambulance staff should obtain all substances and/or medications found at the scene of an emergency call, whether thought to be involved in the overdose or not, and hand these over upon arrival at the emergency department. (GPP)

7.3.3.7 When transporting people who have self-harmed to an emergency department, ambulance staff should take into account the service user’s preferences when more than one emergency department facility exists within a reasonable distance, unless doing so significantly increases the risk to the service user. (GPP)

7.3.3.8 In cases where, following an act of self-injury, the service user does not require emergency treatment in the emergency department, ambulance staff should consider, having taken full account of the service user’s preferences, taking the service user to an alternative appropriate service, such as a specialist mental health service. The decision to do so should be taken jointly between the ambulance staff and the receiving service. (GPP)

7.3.3.9 Ambulance Trusts, the emergency department and Community Mental Health Trusts should work in partnership to develop locally agreed protocols for ambulance staff to consider alternative care pathways to emergency department, for people who have self-harmed, where this is appropriate and does not increase the risks to the service user. (GPP)

7.3.3.10 For people who have self-poisoned and present to the ambulance service within two hours of ingestion, appropriately trained ambulance staff should consider offering activated charcoal if the person is fully conscious and able to protect his or her own airway, at the same time as referral to an emergency department. (A)

7.3.3.11 In the emergency treatment of opioid overdose with IV naloxone, ambulance staff should adhere to the guidelines established by the Joint Royal Colleges Ambulance Liaison Committee. Particular attention should be given to the possible need for repeated doses of naloxone and frequent monitoring of vital signs, as the effects of naloxone hydrochloride are short-lived in comparison with the effects of most opioids and patients frequently relapse once the drug has worn off. All cases of opioid overdose should be conveyed
to hospital, even if the initial response to naloxone has been good. (GPP)

7.3.3.12 Ambulance Trusts should routinely audit incidents of overdose to ensure that interventions are being used consistently. (GPP)

7.3.3.13 Ambulance Trusts should regularly update ambulance staff of any change in the local arrangements for services available for the emergency treatment of people who have self-harmed. (GPP)

7.4 Information and laboratory services available to clinicians treating self-poisoning

7.4.1 Introduction
Most healthcare professionals receive only outline training on the assessment and treatment of poisoning, and even those with a greater interest in this topic cannot be expected to have comprehensive knowledge across the wide range of potential poisons. It is therefore vital that those concerned with the management of self-harm by poisoning have access to up-to-date information, investigations and advice through which to make informed decisions on patient management. This section describes the role of the following services available to clinicians in the UK:

- National Poisons Information Service
- Poisons treatment centres
- Laboratory toxicology services

7.4.2 National Poisons Information Service
The National Poisons Information Service (NPIS) was established in 1963 based on the recommendations of a Ministry of Health Advisory Group (Ministry of Health, 1962) Poisons information services have developed globally and are subject to WHO guidelines (IPCS, 1997)

The NPIS is a free and confidential service provided from six centres (Belfast, Birmingham, Cardiff, Edinburgh, London and Newcastle) using a common telephone system and supporting a shared computerised database (TOXBASE ©). It is available to NHS users and other healthcare providers but not to members of the public who should refer to NHS Direct. In 2001 the total number of telephone enquiries received by the six NPIS centres was reported to be 224,877. This is a 9.5% decrease on 2000 figures, in line with policy to encourage wider use of TOXBASE as the first point of contact, and the
telephone service for the more serious and complicated. User sessions for TOXBASE increased from 102,537 in 2000 to 186,325 in 2001 (71%). Approximately a third of this workload is thought to relate to self-harm. The NPIS also develops standards and audit criteria, runs audits of usage, and provides training for NHS users.

Before using TOXBASE or calling NPIS users should aim to obtain information about:

- The substance to which the patient has been exposed including the route and magnitude of exposure
- Time and duration of exposure
- The patient – age, sex, previous health; pre-existing drug treatment; drug treatment given for the current episode
- Effects – history of symptoms; findings now
- Nature of treatment given, timing in relation to treatment and response to treatment

If samples of poison and patient fluids have been collected they should be stored pending laboratory advice (see laboratory section).

7.4.3 Poisons treatment centres

In 1962 the Ministry of Health Advisory Group on emergency treatment of acute poisoning (Ministry of Health, 1962) recommended that specialist treatment centres with “District” or “Regional” responsibilities should be established alongside poisons information centres. In practice this recommendation was not implemented, primarily because advances in the treatment of poisoning made it possible to manage patients in general hospitals, with support from the NPIS and special toxicology laboratories when necessary.

Currently all active poison treatment centres are attached to NPIS centres, taking cases locally and receiving referrals from other hospitals. They have direct access to full intensive care units and facilitate links with other specialised treatment centres.

The lack of a good evidence base in medical toxicology is well recognised and it is acknowledged that poisons information centres and clinical toxicologists have a responsibility to make available more, high quality clinical data (Buckley & Smith, 1996).
7.4.4 Laboratory toxicology
Most general chemical pathology laboratories offer a limited number of toxicology analyses, whilst other less frequently requested, but technically more demanding, assays are mainly provided by specialised laboratories. Laboratory analyses for use in the diagnosis and management of drug overdose and other cases of suspected poisoning have been developed progressively since the 1960s. With the techniques now available it would be possible to measure almost all poisons and their metabolites. However, since in most cases the results would not influence clinical management, the use of such analyses often cannot be justified. In cases of suspected self-harm by poisoning, current ‘Best Practice’ is, therefore, to save/collection where possible samples of the suspected poison and/or biological samples, and to review the case for their analysis according to clinical need. Recent consensus/recommendations published jointly by the National Poisons Information Service (NPIS) and the Association of Clinical Biochemists (ACB) list the assays considered relevant to current clinical practice and give guidance on standards, availability and turn round times (urgency) (NPIS, ACB 2002).

7.4.5 Recommendations
7.4.5.1 TOXBASE should be available to all clinical staff involved in the emergency treatment of self-poisoning. [GPP]

7.4.5.2 The NPIS telephone number should be available to clinical staff involved in the emergency treatment in a place where it can be used discreetly and without distracting staff from other activities. [GPP]

7.4.5.3 Clinical staff involved in the emergency treatment of self-poisoning should be given training to better understand human toxicology, and in order to make best use of TOXBASE and the NPIS telephone service. The emergency department, in conjunction with local, regional or national toxicology units (including NPIS), should ensure all staff receive regular training. [GPP]

7.4.5.4 Staff involved in the emergency treatment of self-poisoning should collect samples for analysis including blood, urine, gastric contents and, if possible, samples of the suspected poison. [GPP]

7.4.5.5 Emergency department staff involved in collecting samples should be aware of which toxicology tests are available both locally and at the nearest specialised toxicology laboratory. [GPP]

7.4.5.6 Emergency department staff involved in collecting samples should be aware of the correct methods of collecting, handling and
storing samples, and of how they should be transferred to the laboratory. (GPP)

7.4.5.7 Where emergency department staff are unsure about the value of undertaking a toxicology assay or about whether an assay is available locally, advice should be sought from the NPIS or directly from a toxicology laboratory. [GPP]

7.4.5.8 Where emergency department staff are unsure about the interpretation of assay results, advice should be sought from the laboratory or NPIS. [GPP]

7.4.5.9 In cases where the suspected poison is a substance for which little toxicology data exists, laboratory data about exposure and absorption should be passed to the NPIS to help in the development of its poisons database. [GPP]

7.4.6 Research recommendations

7.4.6.1 An adequately powered epidemiological study reporting all relevant outcomes should be undertaken to establish morbidity and mortality rates for specific drug ingestions.

7.4.6.2 A national programme should be developed to coordinate the surveillance of health risks in self-poisoning by NPIS and other agencies so that the combined data can be used to inform and guide recommendations on treatment and prevention.

7.5 The role of triage in the management of self-harm in emergency departments

7.5.1 Introduction
The term triage comes from the French “to sort” or “sorting”. The key issue is: which person gets treated first, so that the “greatest good could be achieved for the greatest number of patients” (Smart et al., 1999).

In the emergency department, where resources may fall short of the immediate needs of service users leading to overcrowding, the need for effective triage systems is undeniable (Brillman et al., 1997). In this context, long waiting times can lead to patients leaving the emergency department without being seen (Bindman et al., 1991; Baker et al., 1991), some of whom may be in need of urgent treatment.

Triage involves a formal and structured assessment of the urgency with which a patient needs treatment using pre-defined criteria. Patients are then allocated to a particular category, which determines how quickly they receive
treatment and ensures that they receive appropriate attention in a suitable location and with the requisite degree of urgency (George et al., 1992). For triage to work effectively it must be initiated on entry to the emergency department. Since 1964 trained nurses have taken the lead role in emergency department triage (Mezza, 1992). Nurse triage often includes the initiation of emergency care, diagnostic measures and patient education (Jones, 1990).

7.5.2 Current practice
All emergency departments in the UK operate some form of triage. In an effort to standardise triage systems, a working group composed of members of the RCN A&E Nurses Association and the British Association for Accident and Emergency Medicine (BAAEM) considered a wide range of different systems for implementation in the UK. This led to the development of the Manchester Emergency Triage (Mackway-Jones, 1996), a system now used widely, although not universally, throughout the UK.

In the Manchester Triage system patients with the highest priority are selected first, not on the basis of diagnosis, but instead on an evaluation of the patient’s presenting complaints and symptoms, and using flow charts to guide the triage nurse’s approach. The system also recommends maximum waiting times for the level of urgency to which a patient is allocated, making audit relatively simple.

Unfortunately, until recently, emergency triage systems took little or no account of a person’s mental and emotional state, instead focusing predominantly upon physical signs and symptoms. The Manchester system, includes four simple flow charts for mental health problems, including “Behaving strangely”, “Deliberate Self-harm”, “Mental Illness” and “Overdose and poisoning”. For patients who have self-harmed, their triage rating is determined mainly by their physical needs rather than their mental state and level of distress; unless their injuries or poisoning are life threatening most will be classified low priority.

Delays in the provision of medical treatment and psychosocial assessment are often perceived by patients who self-harm as punitive, an assumption often confirmed by the sometimes hostile attitudes of some doctors and nurses to people with mental health problems (Bailey, 1998). In addition, nursing staff involved in triage often have little knowledge of mental health issues and are not usually trained to recognise mental health problems that may need urgent intervention.

The Modernisation Agency Improvement Guides (2002) as part of ‘Reforming Emergency Care’ suggested that patients should be streamed according to priority. This has led to the introduction into emergency departments of ‘see and treat’ policies. The impact of this policy on conventional triage systems has not yet been established.
7.5.3 Definition
Triage was defined by the GDG as the systematic clinical review of newly arrived emergency department patients to allocate assessments and treatment priorities using predetermined criteria and an agreed method of classification to determine the level of urgency and target times for management.

7.5.4 Studies considered
No existing systematic review was found. A search found 2,158 items, of which two appeared relevant (Smart et al., 1999; Broadbent et al., 2002) and were considered by the GDG in more detail. These described and evaluated a Mental Health Triage Scale designed in Australia as an adjunct to an existing National Triage Scale, adopted by the Australasian College of Emergency Medicine and by emergency departments in Australia and New Zealand. An additional study compared the use of the Mental Health Triage Scale by emergency department nurses with the use by emergency department-based specialist psychiatric clinical nurse consultants (Happell et al., 2002).

The Mental Health Triage Scale (Smart et al., 1999) was developed with the aim of:

- developing a Mental Health Triage Scale integrated with the National Triage Scale for use in emergency departments
- improving nursing assessment of patients with mental health problems
- improving effectiveness of triage of patients with mental health needs
- reduce overall waiting times for patients with mental health needs
- reduce transit time for patients with mental health needs

For patients who self-harmed, both the Mental Health Triage Scale and the normal method of physical triage were combined. The study used pre-trial measures within the same emergency department for comparison.

7.5.5 Findings
Compared to pre-trial measures, post-trial waiting and transit times were significantly reduced, fewer patients left without being assessed or treated, and the system of triage was rated as acceptable to emergency department nurses. Nurses required training to use the triage system effectively, a need echoed in the study by Happell et al., (2002), which suggested that

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6 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
experienced psychiatric nurses were better at using the Mental Health Triage Scale than their emergency department non-psychiatric nursing colleagues.

Broadbent et al. (2002) also developed a triage scale for mental health, substance misuse and suicide risk for use in the emergency department. Retrospective pre-trial evaluation of emergency department nurses triage ratings for attenders with mental health problems were significantly lower than ratings given by the authors. They found that emergency department staff trained to use the mental health triage scale became much more aware of the needs of patients with mental health problems, gave higher ratings for urgency of assessment and treatment to a greater number of those attending with mental health problems. They reported that emergency department staff rating their own understanding of mental health problems had improved substantially.

Although these studies used designs that leave a great deal unanswered, the results suggest that using an effective mental health triage system may improve some outcomes, improve access to treatment and decrease waiting times for people who present to the emergency department with mental health problems. They also suggest that emergency department triage staff need much more effective training in mental health assessment and preliminary management of such patients, and that collaboration with mental health services and specialists in terms of training, service planning and in the delivery of care is desirable. These suggestions are echoed in the consensus-based monograph relating to emergency departments and psychiatric services jointly produced by the Royal College of Psychiatrists and the British Association for Emergency Medicine (CR32, 1994 under revision).

7.5.6 Clinical summary
Mental health triage systems may improve outcomes, improve access to treatment, reduce waiting times for people with mental health problems attending emergency departments and reduce the numbers who leave without treatment. The Mental Health Triage Scale was found to be acceptable to non-psychiatric triage nurses. Non-psychiatric triage nurses trained in the assessment and initial management of people with mental health problems, and effective collaboration between mental health services and emergency departments, both in terms of planning and service delivery, may also improve the care and help provided for people with mental health problems attending emergency departments.

7.5.7 Clinical practice recommendations
7.5.7.1 Consideration should be given to introducing the Australian Mental Health Triage Scale adapted for use in England and Wales as an adjunct to existing triage systems. [C]
7.5.7.2 Triage nurses working in emergency departments should be trained in the use of mental health triage systems. [C]

7.5.7.3 Emergency departments should consider the provision of training for all healthcare staff, working in that environment, in the assessment of mental health needs and the preliminary management of mental health problems. [C]

7.5.7.4 Emergency departments and local mental health services should jointly plan the configuration and delivery of integrated physical and mental health care services for people who self-harm within emergency departments [C]

7.5.7.5 In jointly planning an integrated emergency department service for people who self-harm, service managers may consider integrating mental health professionals into the emergency department, both to improve the psychosocial assessment and initial treatment for people who self-harm, and to provide routine and regular training to non-mental health professionals working in the emergency department (GPP)

7.5.7.6 In addition, emergency department and local mental health services should jointly plan effective liaison psychiatric services available 24 hours a day. [GPP]

7.5.7.7 A psychosocial assessment should not be delayed until after medical treatment is complete, unless life-saving medical treatment is needed, or the patient is unconscious or otherwise incapable of being assessed. [GPP]

7.5.8 Research recommendations

7.5.8.1 A study of appropriate design reporting all relevant patient outcomes (mortality, morbidity, numbers lost to the service, patient satisfaction) should be undertaken to assess the impact of the introduction of the Mental Health Triage Scale.

7.6 Routine screening for plasma paracetamol concentrations

7.6.1 Introduction
The diagnosis of paracetamol overdose is based, not on physical findings, but on the medical history, which is not always reliable, and the measurement of plasma paracetamol concentrations, the results of which determine treatment. Since, in the UK, paracetamol is the commonest drug taken in overdose, many
emergency departments have adopted a policy of routine screening for the
drug in all cases of suspected self-harm by poisoning.

However, in countries where paracetamol overdose is less common, such as
the USA, the incidence of paracetamol overdose amongst people who have
self-poisoned but deny ingestion of paracetamol is less than 2%; screening
appears to be less justified in these countries (Ashbourne et al., 1989).
However, it is important to note that one patient of 365 in this study had
potentially serious, hepatotoxic levels of serum paracetamol and required
treatment.

In evaluating the role of screening a balance needs to be agreed between the
minimal cost of the test (estimated at £10 per test by Hartington et al., 2002)
and the enormous personal, social and health service costs for just one liver
transplant. The case for screening is stronger in countries and regions where
rates for paracetamol poisoning are higher. In addition it must be
demonstrated that the test will identify covert paracetamol poisoning, have a
low rate of false negatives, and lead to improved patient care and outcomes.
The value of a screening policy in the UK has been criticised largely because
of a lack of evidence that they influence patient care, or because of cost.

7.6.2 Studies reviewed
No existing systematic review of the effectiveness of paracetamol screening
was found. The NCCMH review team therefore undertook such a review. Of
1,688 items found in a systemic literature search, sixteen were initially
considered relevant, with two recent studies being considered for review.
Since none of these were RCTs a narrative review was undertaken. Only
studies in the UK were considered relevant.

7.6.3 Evidence
Two recent studies in the UK (Dargan et al., 2001; Hartington et al., 2002)
examined the need to measure paracetamol concentrations in patients with a
history of suspected paracetamol poisoning who deny ingestion. Dargan,
using a retrospective design, also looked at the value of measuring
paracetamol concentrations in all patients with a history of collapse where
overdose is considered to be a possible diagnosis. Both give support to the
use of paracetamol screening. However, as Hartington et al. (2002) point out,
to establish the evidence base to support paracetamol screening, or indeed the
use of a clinical decision rule, based upon patient factors and clinical findings,
to guide more limited screening, an acceptable rate of false negatives would
have to be agreed in advance, and to examine this issue effectively and with
sufficient power, a study would need about 20,000 participants.

Neither of the studies reviewed demonstrated an impact on treatment when
paracetamol screening was undertaken for patients who deny taking
paracetamol, since none of those detected through screening had potentially toxic levels. Importantly, Hartington et al. (2002) report that physicians remain concerned not to miss any treatable paracetamol overdose as they are potentially life threatening, and argue that there are no current grounds for stopping, or indeed modifying, the current practice of paracetamol screening for people who are suspected of having taken an overdose of paracetamol. Indeed, the authors suggest that even if screening were not recommended, few clinicians would stop screening without adequate additional proof of its lack of benefit.

In summary, there is insufficient evidence to convincingly determine the positive or negative value of paracetamol screening. Without an adequate demonstration of its lack of effectiveness, it is unlikely that clinicians in the UK would be willing to change the current approach to screening.

7.6.4 Clinical practice recommendation

7.6.4.1 Plasma paracetamol concentrations should be measured in all conscious patients with a history of paracetamol overdose, or suspected paracetamol overdose, and in unconscious patients with a history of collapse where drug overdose is a likely diagnosis. [C]

7.6.5 Research recommendation

7.6.5.1 A well designed, prospective multicentre study of screening for plasma paracetamol concentrations, including health economic analyses, is required in order to develop detailed guidelines on the selection criteria, clinical value and cost-effectiveness of screening for paracetamol.

7.7 The treatment and management of self-poisoning by gut decontamination

7.7.1 Introduction
Self-harm by poisoning can involve all possible routes of exposure including inhalation, injection and skin absorption. In the vast majority of cases, however, exposure is via the oral route and management has traditionally included measures to reduce absorption of poisons from the gastro-intestinal tract – so-called gastro-intestinal (GI) decontamination. GI decontamination may be achieved by attempting to remove the ingested poison from the stomach using an emetic or by gastric lavage; by giving activated charcoal to adsorb the poison in the GI tract and thus reduce absorption into the body; or, by decreasing gastrointestinal transit time with the aim of rapidly expelling the poison before it is absorbed using cathartics or whole bowel irrigation. Multiple dose activated charcoal therapy (more than two doses) has also been
used to enhance elimination of drugs already absorbed into the body (AACT, 1999).

Doubts about the efficacy of cathartics and emesis, and about the safety and efficacy of gastric lavage, have limited their use in recent years. Whole bowel irrigation is used only rarely for a very limited number of indications, for example, following potentially toxic ingestions of sustained-release or enteric-coated drugs, iron, lead, zinc and packets of illicit drugs. It should only be used if advised in consultation with NPIS and/or a Poisons Treatment Centre.

Against this background this section reviews the evidence for the effectiveness and safety of single dose activated charcoal, emesis with syrup of ipecacuanha (ipecac) and gastric lavage, when used alone or in combination, in the treatment of poisoning. The GDG widened the standard inclusion criteria to include studies undertaken on healthy volunteers. The use of sorbitol as an osmotic cathartic was not reviewed for this guideline given its uncommon use.

Data were available to make the following comparisons:

- Activated charcoal (at various time intervals) versus ‘control’ (water)
- Activated charcoal versus gastric lavage
- Activated charcoal versus ipecac
- Activated charcoal versus activated charcoal and ipecac
- Single dose activated charcoal versus multiple dose activated charcoal
- Activated charcoal at various time intervals

### Definitions and aim of interventions

1.1.1.7 Medicinal activated charcoal

Activated charcoal (AC) is prepared from vegetable matter “activated” by a chemical process, which increases the surface area and meets the British Pharmacopoeia or similar standard for adsorbance (British Pharmacopoeial Commission, 2003). Activated charcoal adsorbs a wide range of drugs and other compounds, including many of the drugs that are commonly used in overdose such as tricyclic antidepressants and paracetamol. It thereby has the potential to prevent their systemic absorption through the gastrointestinal tract.

In addition, in multiple and sometimes in single doses, it has been suggested that activated charcoal may increase elimination of some drugs after they have been absorbed into the blood by means of so-called entero-hepatic elimination (Ilkhanipour et al., 1992; Kirschenbaum et al., 1990).
Activated charcoal therapy involves the administration of an aqueous suspension of AC, either by swallowing or by nasogastric tube, while the poison remains in the stomach (AACT-EAPCCT, 1997). Although activated charcoal has been demonstrated to reduce systemic absorption of a number of compounds in animal and human volunteer studies (Position Statement: Single-dose Activated Charcoal, 1997), and to increase elimination of a more limited number of compounds, its use in the clinical context in which mixed overdose is commonly encountered requires evaluation. Moreover, the optimum dose of activated charcoal and the influence of the time delay before treatment both remain uncertain.

Activated charcoal is contraindicated if the patient has an unprotected airway, (absence of gag reflex) or when the level of consciousness is depressed and the patient has no airway protection. Following activated charcoal vomiting can occur. The more serious potentially fatal complication is pulmonary aspiration, which occurs when the airway has been inadequately protected. Most case reports of aspiration pneumonitis associated with activated charcoal occur following installation of AC via nasogastric tube, usually without prior endotracheal intubation (for example, see Pollack et al., 1981; Harsch, 1986; Dammann et al., 1988: Menzies et al., 1988; Elliott et al., 1989; Silberman et al., 1990; Harris & Filandrinos, 1993).

Multiple doses of activated charcoal may cause mild, transient constipation and occasionally bowel obstruction has been reported.

Ipecac

Ipecac is the term used for pharmaceutical preparations, such as Paediatric Ipecacuanha Emetic mixture, which contain plant alkaloids derived from Cephalis ipecacuanha or C. acuminata. The administration of ipecac to induce vomiting and, thereby, gastric emptying, has been used in the treatment of self-poisoning for many years, particularly for accidental poisoning in children (Position Statement: Ipecac Syrup, 1997). However, the risk of aspiration of stomach contents has limited its use to patients who are conscious and reasonably co-operative (Position Statement: Ipecac, 1997).

Ipecac is contraindicated following ingestion of a substance likely to cause depressed levels of consciousness or convulsions, and following ingestion of hydrocarbons with high aspiration potential, or ingestion of corrosive substances. In addition, the administration of Ipecac may delay the administration of activated charcoal or oral antidotes.

Animal studies, in which conditions are reasonably well controlled, suggest that the effect upon absorption is highly variable (Position Statement: Ipecac Syrup, 1997). Similarly, volunteer studies have also shown variable effectiveness depending on the time interval between ingestion of a drug and the onset of emesis (Position Statement: Ipecac Syrup, 1997). Although benefit
has been reported in individual cases, clinical studies have not demonstrated benefit from its use. Its effectiveness is reduced if given more than 1 hour after ingestion (Bond et al., 1993).

The AAPCC position statement acknowledges that ipecac has an exceptionally high margin of safety considering its widespread use. Serious complications are very rare but a small number of fatalities have been associated with its use (Robertson, 1979, Klein-Schwartz 1984, and Knight, 1987).

**Gastric lavage**

Gastric lavage also has a long history and for sometime was the mainstay of treatment for self-poisoning. As with ipecac, the aim of treatment is to remove the stomach contents and thereby prevent or reduce absorption of the ingested poison(s). In practice, the stomach is first aspirated after which it is washed out with small amounts of water administered sequentially through an oro-gastric tube, and eliminated by drainage. Although benefit has been reported in individual cases, clinical studies have not confirmed the benefit of gastric lavage even when performed less than 60 minutes after ingestion of a poison, and there is the possibility that drug absorption may be enhanced by its use. However, this is contentious, and evidence that gastric lavage exacerbates self-poisoning by increasing or speeding absorption, pushing poison into the part of the gut where most absorption takes place, is lacking (Eddleston, 2003).

Gastric lavage is contraindicated when the patient has an unprotected airway or after ingestion of a hydrocarbon with high aspiration potential, or in patients at risk of haemorrhage or gastrointestinal perforation. Serious complications are rare.

### 7.7.3 Studies considered

Although consensus reviews of gastric decontamination methods have been published (AACT-EAPCCT, 1997, 1997a, 1997b, 1997c, 1997d, 1999a) systematic reviews of these methods have not been undertaken. The NCCMH team therefore undertook such a review. Of 1,177 items found in a search for all treatments of overdose, nine were RCTs comparing: activated charcoal (AC) with either gastric lavage or emesis with ipecac; single dose of AC with multiple doses; or AC given immediately with AC given after a delay. Four of these were excluded (BOSSE1995, KULIG1985, MERIGAN2002, POND1995),

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7 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
8 Here and elsewhere in the guideline, each study considered for review is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, when a date is not used). Information about included studies is included in Appendix 17, which also includes a list of excluded studies together with reasons for exclusion. Full references to studies reviewed are in Appendix 18.
leaving five (ALBERTSON1989, LAINE1994, LAINE1997, POND1984, UNDERHILL1990). Apart from two studies (LAINE1994, LAINE1997), which used healthy volunteers, the other studies were conducted with patients arriving at emergency departments with a suspected overdose.

In addition, studies using healthy volunteers were found in which data reported combined pre- and post-cross-over outcomes, precluding meta-analyses. However, two of these looked at activated charcoal given at different time intervals (GREEN2001, ROSE1991). Since this is an important comparison for which there is little other level 1 evidence, these studies were considered in a narrative review in addition to the data from non-cross over studies.

**Studies considered**

ALBERTSON1989 compared activated charcoal with ipecac followed by activated charcoal in patients who had ingested a range of substances.

GREEN2001 compared activated charcoal given at one, two or three hours after ingestion with a ‘control’ group, using healthy volunteers given 4g paracetamol in a cross-over design.

LAINE1994 compared single dose with repeated dose activated charcoal following astemizole ingestion in healthy volunteers.

LAINE1997 compared activated charcoal given at different time intervals following amlodipine ingestion in healthy volunteers.

POND1984 compared single dose with repeated dose activated charcoal in patients with phenobarbitone overdose.

ROSE1991 compared activated charcoal given at 15, 20 or 120 minutes after ingestion with a ‘control’ group, using healthy volunteers given 5g paracetamol in a cross-over design.

UNDERHILL1990 compared activated charcoal, gastric lavage and emesis with ipecac in patients who had ingested 5g or more of paracetamol within four hours of attendance. This study was small and the randomisation procedure was unclear since a fourth ‘control’ group was established at another hospital (although abandoned for ethical reasons). This study is also considered in Section 7.6 on paracetamol overdose.

**7.7.4 Outcomes**
The following outcomes were considered:

- Number of patients experiencing complications
• Number of patients hospitalised
• Number of patients admitted to ICU
• % fall in plasma paracetamol
• Duration of mechanical ventilation (in hours)
• Time before criteria met for extubation (in hours)
• Time intubated (in hours)
• Time in hospital (in hours)
• Serum phenobarbital when ready for extubation (mg/L)
• Serum phenobarbital half-life during intubation (in hours)
• Serum phenobarbital half-life after extubation (in hours)
• Renal clearance of phenobarbital during intubation (ml/min)
• Renal clearance of phenobarbital after extubation (ml/min)
• Outcomes for AC at different time intervals (immediately, 2h and 6h) were extracted:
  • Area under amlodipine plasma concentration-time curve from 0 to 96 h (ng per ml hours)
  • Peak amlodipine plasma concentration (ng per ml)
  • Urinary excretion of amlodipine in 72 hours (in micrograms)

7.7.5 Evidence statements

7.7.5.1 Activated charcoal taken immediately versus water taken immediately

Effect of treatment on outcomes
There is strong evidence suggesting that there is a clinically significant difference favouring activated charcoal taken immediately over water taken immediately on the area under the plasma concentration curve from 0 to 96

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9 Forest plots are available in Appendix 19. All evidence statements are from level 1 evidence.
There is evidence suggesting that there is a statistically significant difference favouring activated charcoal taken immediately over water taken immediately on the area under the plasma concentration curve from 0 to 96 hours in individuals ingesting astemizole, but the size of this difference is unlikely to be of clinical significance (N=1, n=14, WMD=-345; 95% C.I. -374.52 to -315.48).

There is strong evidence suggesting that there is a clinically significant difference favouring activated charcoal taken immediately over water taken immediately on the peak plasma concentration in individuals ingesting amlodipine (N = 1; n = 16; WMD = -6.5; 95% C.I., -8.18 to –4.82).

There is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal taken immediately over water taken immediately on the peak plasma concentration in individuals ingesting astemizole (N = 1; n = 14; WMD = -9.1; 95% C.I., -9.92 to –8.28).

7.7.5.2 Activated charcoal at two hours versus water taken immediately
There is strong evidence suggesting that there is a clinically significant difference favouring activated charcoal taken at 2 hours after amlodipine ingestion over water taken immediately on the area under the plasma concentration curve from 0 to 96 hours in volunteers ingesting amlodipine (N = 1; n = 16; WMD = -130; 95% C.I., -200.93 to -59.07).

There is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal taken at 2 hours after amlodipine ingestion over water taken immediately on the peak plasma concentration in volunteers ingesting amlodipine (N = 1; n = 15; WMD = -3.1; 95% C.I., -4.94 to -1.37).

There is insufficient evidence to determine if there is a clinically significant difference between activated charcoal taken at 2 hours after amlodipine ingestion and water taken immediately on the elimination half-life in volunteers ingesting amlodipine (N = 1; n = 16; WMD = -1; 95% C.I., -6.35 to 4.35).

7.7.5.3 Activated charcoal at six hours versus water taken immediately
There is insufficient evidence to determine if there is a clinically significant difference between activated charcoal taken at 6 hours after amlodipine ingestion and water taken immediately on the area under the concentration
curve from 0 to 96 hours in volunteers ingesting amlodipine (N = 1; n = 16; WMD = -39; 95% C.I., -115.86 to 37.86).

There is evidence suggesting that there is no clinically significant difference between activated charcoal taken at 6 hours after amlodipine ingestion and water taken immediately on the peak plasma concentration in volunteers ingesting amlodipine (N = 1; n = 15; WMD = 0; 95% C.I., -2.53 to 2.53).

There is insufficient evidence to determine if there is a clinically significant difference between activated charcoal taken at 6 hours after amlodipine ingestion and water taken immediately on the elimination half-life in volunteers ingesting amlodipine (N = 1; n = 16; WMD = -2.1; 95% C.I., -6.4 to 2.2).

7.7.5.4 Repeated dose activated charcoal versus water taken immediately

There is evidence suggesting that there is a statistically significant difference favouring repeated-dose activated charcoal over water taken immediately on the area under the plasma concentration curve in volunteers ingesting astemizole, but the size of this difference is unlikely to be of clinical significance (N = 1; n = 14; WMD = -88; 95% C.I., -131.63 to -44.37).

There is evidence suggesting that there is no clinically significant difference between repeated-dose activated charcoal and water taken immediately on the peak plasma concentration in volunteers ingesting astemizole (N = 1; n = 14; WMD = -0.5; 95% C.I., -1.71 to 0.71).

There is insufficient evidence to determine if there is a clinically significant difference between repeated-dose activated charcoal and water taken immediately on the elimination half-life in volunteers ingesting astemizole (N = 1; n = 14; WMD = -6; 95% C.I., -75.5 to 63.5).

7.7.5.5 Activated charcoal versus activated charcoal plus emesis with ipecac

Effect of treatment on outcomes

There is insufficient evidence to determine if there is a clinically significant difference between activated charcoal and activated charcoal plus ipecac on:

- reducing the likelihood of treatment-related complications in patients with suspected overdose
- reducing the likelihood of hospitalisation in patients with overdose
- reducing the likelihood of ICU admission in patients with overdose
7.7.5.6 Activated charcoal versus gastric lavage

Effect of treatment on plasma paracetamol levels
There is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal over gastric lavage on reducing plasma paracetamol levels (as measured by percentage fall in plasma paracetamol level) in patients with paracetamol overdose (N = 1; n = 34; WMD = -12.92; 95% C.I., -22.63 to -3.21).

7.7.5.7 Activated charcoal versus emesis with ipecac

Effect of treatment on plasma paracetamol levels
There is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal over emesis with ipecac on reducing plasma paracetamol levels (as measured by percentage fall in plasma paracetamol level) in patients with paracetamol overdose (N = 1; n = 34; WMD = -11.55; 95% C.I., -21.36 to -1.74).

7.7.5.8 Single dose activated charcoal versus repeated doses

Effect of treatment on a range of outcomes
There is evidence suggesting that there is a statistically significant difference favouring single-dose activated charcoal over repeated-dose activated charcoal on change in astemizole plasma concentration between 0 and 96 hours in healthy volunteers ingesting astemizole, but the size of this difference is unlikely to be of clinical significance (N = 1; n = 14; WMD = -257; 95% C.I., -291.5 to -222.5).

There is limited evidence suggesting that there is a clinically significant difference favouring a single dose of activated charcoal over repeated doses of activated charcoal on:

- peak astemizole plasma concentration in healthy individuals ingesting astemizole (N = 1; n = 14; WMD = -8.6; 95% C.I., -9.49 to -7.71).

There is limited evidence suggesting that there is a clinically significant difference favouring repeated doses of activated charcoal over a single dose of activated charcoal on:

- the level of serum phenobarbital when ready for extubation in patients with phenobarbital overdose (N = 1; n = 10; WMD = 34; 95% C.I., 15.81 to 52.19).
• the serum phenobarbital half-life during intubation in patients with phenobarbital overdose (N = 1; n = 10; WMD = 56.4; 95% C.I., 11.08 to 101.72).

There is insufficient evidence to determine if there is a clinically significant difference between a single dose of activated charcoal and repeated doses of activated charcoal on:

• the duration of mechanical ventilation in patients with poisoning from a range of ingested substances

• the time before criteria for extubation was met in patients with poisoning from a range of ingested substances

• the duration of intubation in patients with poisoning from a range of ingested substances

• the time spent in hospital in patients with poisoning from a range of ingested substances

• serum phenobarbital half-life after extubation in patients with phenobarbital overdose

• renal clearance of phenobarbital during extubation in patients with phenobarbital overdose

• renal clearance of phenobarbital after extubation in patients with phenobarbital overdose.

7.7.5.9 Activated charcoal taken immediately versus activated charcoal taken after two hours

The cross-over studies came to different conclusions with GREEN2001 concluding that administration of activated charcoal in paracetamol overdose was worthwhile only up to one hour after ingestion and ROSE1991 concluding that it was worthwhile up to two hours.

In healthy individuals ingesting amlodipine there is strong evidence that there is a clinically significant difference favouring activated charcoal taken immediately over activated charcoal taken after two hours on:

• change in amlodipine plasma concentration between 0 and 96 hours in healthy volunteers ingesting amlodipine (N = 1; n = 16; WMD = -134.10; 95% C.I., -152.14 to -116.06).
• peak amlodipine plasma concentration in healthy volunteers ingesting amlodipine (N = 1; n = 16; WMD = -3.4; 95% C.I., -3.93 to -2.87).

In healthy individuals ingesting amlodipine there is limited evidence that there is a clinically significant difference favouring activated charcoal taken immediately over activated charcoal taken after two hours on:

• on urinary excretion of amlodipine in 72 hours in healthy volunteers ingesting amlodipine (N = 1; n = 16; WMD = -212; 95% C.I., -293.77 to -130.23).

7.7.5.10 Activated charcoal taken immediately versus activated charcoal taken after six hours
In healthy volunteers ingesting amlodipine there is strong evidence suggesting that there is a clinically significant difference favouring activated charcoal taken immediately over activated charcoal taken after 6 hours on:

• change in amlodipine plasma concentration between 0 and 96 hours (N = 1; n = 16; WMD = -225.1; 95% C.I., -259.76 to -190.44)

• peak amlodipine plasma concentration (N = 1; n = 16; WMD = -6.5; 95% C.I., -8.31 to -4.69)

In healthy volunteers ingesting amlodipine there is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal taken immediately over activated charcoal taken after 6 hours on:

• on urinary excretion of amlodipine in 72 hours (N = 1; n = 16; WMD = -239; 95% C.I., -288.9 to -189.1).

7.7.5.11 Activated charcoal taken after two hours versus activated charcoal taken after six hours
In healthy volunteers ingesting amlodipine there is limited evidence suggesting that there is a clinically significant difference favouring activated charcoal taken after two hours over activated charcoal taken after 6 hours on:

• change in amlodipine plasma concentration between 0 and 96 hours (N = 1; n = 16; WMD = -91; 95% C.I., -130.05 to -51.95)

• peak amlodipine plasma concentration between 0 and 96 hours (N = 1; n = 16; WMD = -3.1; 95% C.I., -4.97 to -1.23)

In healthy volunteers ingesting amlodipine there is insufficient evidence to determine whether there is a clinically significant difference between
activated charcoal taken after two hours and activated charcoal taken after 6 hours on:

- urinary excretion of amlodipine in 72 hours (N = 1; n = 16; WMD = -27; 95% C.I., -122.79 to 68.79).

7.7.6 Clinical summary

There is insufficient evidence to support the addition of ipecac to activated charcoal in the management of overdose, but limited evidence that activated charcoal is more effective than either gastric lavage or emesis with ipecac, although the one available study was small with doubtful randomisation and the outcome measured was not clinically meaningful.

In cases of poisoning with amlodipine there is strong evidence that administering activated charcoal is effective in preventing absorption of the ingested drug up to two hours after ingestion, whereas six hours after ingestion there is no difference between activated charcoal and water. There is also limited evidence from cross-over trials that administering activated charcoal within two hours of ingestion is more effective than delaying administration for longer.

In cases of poisoning with astemizole, there is limited evidence suggesting that activated charcoal reduces absorption of the ingested drug, and that a single dose of activated charcoal is sufficient to prevent the absorption of the ingested drug and to shorten its elimination half-life. However, in cases of poisoning with phenobarbital, there is limited evidence from a single small study that repeated doses of activated charcoal increase the elimination of the drug.

7.7.7 Clinical practice recommendations

7.7.7.1 Gastro-intestinal decontamination should be considered only for people who have self-harmed by poisoning who present early, are fully conscious with a protected airway, and are at risk of significant harm as a result of poisoning. [B]

7.7.7.2 Healthcare practitioners should offer activated charcoal to any person who has self-poisoned within the last two hours, unless this is contra-indicated, if the person is fully conscious and able to protect his or her own airway. [A]

7.7.7.3 All healthcare professionals who may be involved in the care of people who have self-harmed by poisoning, including ambulance personnel and primary care healthcare workers, should consider ensuring that they are able to offer activated charcoal at the earliest
opportunity, and especially within the first two hours following ingestion of poison. (B)

7.7.7.4 Multiple doses of oral activated charcoal should be used only to reduce the absorption of poisons in people who self-harm by poisoning following consultation with NPIS or a poisoning treatment centre. [B]

7.7.7.5 Emetics, including ipecac, should not be used in the management of self-harm by poisoning. [B]

7.7.7.6 Cathartics as a specific treatment should not be used in the management of self-harm by poisoning. [C]

7.7.7.7 Gastric lavage should only be used in the management of self-harm by poisoning following consultation with NPIS or a poisoning treatment centre. (B)

7.7.7.8 In patients who are considered at risk of self-harm by poisoning healthcare professionals should prescribe, whenever possible, those drugs which, whilst effective for their intended use, are least dangerous in overdose. [GPP]

7.7.7.9 In cases where service users have self-poisoned using a prescription medication consideration should be given to prescribing an alternative medicine with a lower toxic profile. [GPP]

7.7.7.10 Harm minimisation strategies should not be offered for people who have self-harmed by poisoning. There are no safe limits in self-poisoning. [GPP]

7.7.7.11 Where service users are likely to repeat self-poisoning, clinical staff (including pharmacists), may consider discussing the risks of self-poisoning with service users, and carers where appropriate. [GPP]

7.7.8 Research Recommendations

7.7.8.1 An RCT, recording all relevant biochemical and clinical outcomes, is needed to determine the efficacy of multiple-dose AC, as compared to single dose AC, in the treatment of Phenobarbital overdose. Consideration should be given to extending the study to incorporate other drugs for which there may be some evidence for the superior effectiveness of multiple-dose AC over single dose AC, such as carbamazepine and aspirin.
7.8 Treatment and management of poisoning with salicylates

7.8.1 Introduction
Self-poisoning with salicylates represented about 7% of all self-poisonings according to data for 2001 from the National Poisons Information Service London Centre (see Chapter 2). Current evidence suggests that there has been a little change in the discharge rate following self-poisoning with salicylates between 1981 and 1993 in Scotland (Mcloone & Crombie (1996), although the absolute numbers dropped from 626 to 486 (Crombie & Mcloone, 1998). However, data for England and Wales regarding people who died from aspirin overdose (suicidal and accidental) suggest there has been a 48% fall over the period 1996 and 1999 (Hawton et al., 2001). The later study also examined the number of aspirin overdoses, alone or in combination, presenting to five hospitals over the same period; the number of aspirin overdose did not change significantly, raising the possibility that the treatment is more effective. However, data limited to a small handful of hospitals may not be representative.

In any event, aspirin overdose can be serious, leading to hyperventilation, tinnitus and deafness, vasodilatation and sweating. Severe cases can result in coma and death. The major clinical problem following salicylate poisoning is maintaining a balanced acid-base metabolism (BNF, 2003: Emergency Treatment of Poisoning).

7.8.2 Current clinical practice
Salicylate absorption can be reduced using activated charcoal, taken within the first two hours after ingestion. The evidence for the use of activated charcoal is reviewed separately (see section 6.7). This section will be restricted to reviewing the subsequent treatment of salicylate poisoning.

Following salicylate overdose, treatment will depend upon plasma salicylate levels, pH and electrolyte balance. Fluid replacement is usually necessary, and when the plasma concentration of salicylates exceeds 500mg/litre in adults, or 350mg/litre in children, the administration of sodium bicarbonate is recommended to promote urinary excretion of salicylates. In more severe cases, especially if plasma salicylate concentrations are greater than 700mg/litre, or in the presence of severe metabolic acidosis, then haemodialysis is the treatment of choice (BNF, 2003, p 20).
7.8.3 Studies reviewed
No existing systematic review of the treatment of salicylate poisoning was found. The NCCMH review team therefore undertook systematic searches of electronic databases. A total of 701 articles were downloaded of which thirteen were considered relevant. Since none of these was an RCT a narrative review was undertaken.

A number of case studies were identified, for example examining the effect of sodium bicarbonate and haemodialysis (Higgins, Connolly & Hendry, 1998), haemodialysis and haemoperfusion (Jacobsen, Wiik-Larson & Bredesen, 1988) and the use of haemodiafiltration (Wrathall et al., 2001) following salicylate poisoning. These individual studies provide some confirmation that current practice is supportable, and suggest alternatives for people who cannot undergo haemodialysis.

In summary, we found no substantial or reliable evidence to suggest there should be a change in the currently accepted treatment of salicylate poisoning.

7.8.4 Clinical practice recommendations

7.8.4.1 For people who have self-poisoned with salicylates, are fully conscious, have a protected airway, and present to services within 2 hours after ingestion, activated charcoal should be offered. (A)

7.8.4.2 The further treatment of self-poisoning with salicylates should follow the current guidance outlined in the BNF section on the emergency treatment of poisoning with aspirin. (C)

7.9 Treatment and management of paracetamol overdose

7.9.1 Introduction
Paracetamol is rapidly absorbed from the stomach and small bowel and interventions for reducing absorption should be carried out within 2 hours of ingestion (see 10.5 above). Once absorbed, Paracetamol is hepato-toxic and can cause fulminant hepatic failure (FHF) and death, even after an overdose of 10-15g or 150mg/kg taken over a period of 24hrs. Early features of paracetamol overdose include nausea and vomiting, which usually settle within 24hrs following ingestion, although persistence beyond this usually suggests liver damage (BNF, 2003).

10 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
Guidelines drawn up by the National Poisons Information Service (NPIS), BAEM and the Royal College of Paediatricians and Child Health (NPIS, 2002) are currently in use in UK emergency departments. An evidence-based flow chart has been produced to augment this and can also be used as a standalone guidance tool (Wallace 2002). This recommends the use of intravenous N-acetylcysteine (NAC) to prevent liver damage when potentially toxic serum paracetamol levels are reached following overdose. The guidelines do not include other licensed treatments for paracetamol overdose, such as methionine, which can induce nausea and vomiting thus exacerbating the vomiting induced by paracetamol overdose. However, the NPIS does recognise the use of methionine in limited circumstances when an oral antidote is appropriate, or when the patient has previously experienced an anaphylactoid reaction to the administration of NAC.

7.9.2 **Current clinical practice**
In current clinical practice most UK centres use NAC as the drug of choice in the treatment of paracetamol overdose. The administration of NAC is dependent on the levels of paracetamol obtained four hours after ingestion, and should be used within 10-12 hrs following ingestion, although it may protect the liver when administered up to 24hrs following paracetamol overdose (BNF, 2003). Other treatments such as charcoal haemoperfusion are not currently used.

Since fulminant hepatic failure does not become established within the first 48 hours after paracetamol poisoning, the guideline does not cover the management of this. Similarly liver transplantation was not considered. One study on patients with fulminant hepatic failure was included as it is the only available study of NAC.

7.9.3 **Studies reviewed**
A systematic review by Brok et al. (2002), using RCT and non-RCT evidence, was identified and used for this review. The first author made his data available to the NCCMH review team. Non-RCT evidence was not considered for review.

Nine RCTs looked at various treatments for paracetamol overdose including cysteamine, dimercaprol and fresh frozen plasma, which are not licensed for this use in the UK and therefore excluded from this review. Thus, four

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11 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
12 Here and elsewhere in the guideline, each study considered for review using meta-analysis is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, when a date is not used). Information about included studies is included in Appendix 17, which also includes a list of excluded studies together with reasons for exclusion. Full references to studies reviewed are in Appendix 18.
studies in the original review were excluded (DOUGLAS1996, GAZZARD1994, GAZZARD1975, and HUGHES1977). In addition, those studies looking at the treatment of patients with fulminant hepatic failure were also excluded unless they looked at a treatment not considered by other studies. Thus HAMLYN1981 and OGRADY1988 were included but KEAYS1991 was not included. The study by UNDERHILL1990, which compared activated charcoal with both gastric lavage and ipecac in patients with paracetamol poisoning, is considered in Section 7.5 above. The included studies examined:

- Charcoal haemoperfusion and supportive treatment versus supportive treatment (GAZZARD1994A)
- Methionine and supportive treatment versus supportive treatment (HAMLYN1981)

**Outcomes**

- Mortality
- Hepatotoxicity (defined as AST > 1000 U/L)
- Liver histology (more than ¼ liver cell plates destroyed)
- Cerebral oedema
- Patients requiring renal support
- Patients developing hypotension

### 7.9.4 Evidence statements

**Charcoal haemoperfusion and supportive treatment versus supportive treatment**

There is insufficient evidence to determine whether there is a clinically significant difference between charcoal haemoperfusion plus supportive treatment and supportive treatment on mortality in patients with paracetamol overdose (N=1; n=16; RR = 3, 95% C.I., 0.14 to 64.27).

**Methionine and supportive treatment versus supportive treatment**

There is limited evidence suggesting that there is a clinically significant difference favouring methionine plus supportive treatment over supportive treatment on reducing hepatotoxicity in patients with paracetamol overdose (N=1; n=26; RR = 0.14; 95% CI, 0.02 to 1; NNH=3, 95% CI 2 to 7).
There is insufficient evidence to determine whether there is a clinically significant difference between methionine plus supportive treatment and supportive treatment on mortality in patients with paracetamol overdose (N=1; n=26; RR = 0.33; 95% CI, 0.01 to 7.5).

There is insufficient evidence to determine whether there is a clinically significant difference between methionine plus supportive treatment and supportive treatment on liver histology (N=1; n=19; RR = 0.42; 95% CI, 0.16 to 1.1).

**Intravenous NAC versus ‘placebo’**

There is limited evidence suggesting that there is a clinically significant difference favouring N-acetylcysteine over placebo on mortality in patients with fulminant hepatic failure following paracetamol poisoning (N=1; n=50; RR = 0.65; 95% CI, 0.43 to 0.99; NNH=4, 95% CI, 2 to 34).

There is insufficient evidence to determine whether there is a clinically significant difference between N-acetylcysteine and placebo on cerebral oedema in patients with fulminant hepatic failure following paracetamol poisoning (N=1; n=50; RR = 0.59; 95% CI, 0.34 to 1.02).

There is insufficient evidence to determine whether there is a clinically significant difference between N-acetylcysteine and placebo on requiring renal support in patients with fulminant hepatic failure following paracetamol poisoning (N=1; n=50; RR = 0.67; 95% CI 0.37 to 1.19).

There is limited evidence suggesting that there is a clinically significant difference favouring N-acetylcysteine over placebo on developing hypotension in patients with fulminant hepatic failure following paracetamol poisoning (N=1; n=50; RR = 0.6; 95% CI, 0.38 to 0.94; NNH = 4; 95% C.I., 2 to 15).

**7.9.5 Clinical summary**

Although the most commonly used treatment for the later sequelae of paracetamol overdose in current clinical practice is intravenous NAC, there is RCT evidence for its effectiveness only in the treatment of patients with fulminant hepatic failure. The evidence for the use of NAC in other contexts is based on observational studies (e.g., Prescott et al., 1979). Rarely NAC causes anaphylactoid reactions.

There is limited evidence favouring oral methionine plus supportive treatment over supportive treatment alone, on reducing hepatotoxicity in patients with paracetamol overdose, although numbers were small. No direct comparison of methionine and NAC could be identified.
Clinical practice recommendations

7.9.6.1 The NPIS flowchart (*Paracetamol overdose: a flowchart to guide management*) should be used to guide patient management. This should be easily available to clinicians treating paracetamol poisoning. [C]

7.9.6.2 Activated charcoal should be considered for gut decontamination in cases of paracetamol poisoning presenting up to two hours after ingestion. [B]

7.9.6.3 Intravenous N-Acetylcysteine should be considered in the treatment of paracetamol overdose (although the optimum dose is unknown) unless contraindicated - for example, in patients who report known allergies to NAC, for intravenous drug abusers where intravenous access may be difficult, or in the case of needle phobia, when oral methionine should be considered. [C]

7.9.6.4 N-Acetylcysteine should only be used when full resuscitation equipment is available including access to intravenous antihistamines and cortico-steroids. [GPP]

7.9.6.5 In the event of an anaphylactoid reaction following administration of intravenous NAC, methionine may be considered as an alternative. [GPP]

7.9.6.6 In cases of staggered ingestion of paracetamol the NPIS flowchart (*Paracetamol overdose: a flowchart to guide management*) should be used in conjunction with discussion with the NPIS. [GPP]

Research recommendations

7.9.7.1 An appropriately designed and adequately powered study should be undertaken to clarify the optimum dose level at which NAC should be used (for both oral and intravenous administration) in the treatment of paracetamol poisoning, reporting all relevant biochemical and clinical outcomes, including liver function, liver failure and adverse reactions. Consideration should be given to patient characteristics such as co-ingested substances, including alcohol.

7.9.7.2 An adequately powered RCT reporting all relevant outcomes should be undertaken to assess the relative efficacy and tolerability of methionine compared with NAC in the treatment of paracetamol overdose.
7.10 The use of flumazenil in the treatment and management of benzodiazepine overdose

7.10.1 Introduction

Benzodiazepines (BDZs) are common prescription drugs, accounting for between 17% and 24% of all CNS drugs prescribed in the UK in 2002 (Prescription Pricing Authority, UK). Benzodiazepines are used in the treatment of people with anxiety and other common mental disorders, many of whom have an increased risk of suicide and self-harm (Lekka et al., 2002; Neutel & Patten, 1997). Benzodiazepines may also cause dependence (Schweizer & Rickels, 1998; Mant & Walsh, 1997), are misused for non-therapeutic purposes (Kapczinski et al., 2001; Woods & Winger, 1997) and can be obtained illegally (Dvornik et al., 2001; Yacoubian, 2003). It is perhaps unsurprising, therefore, that a significant percentage of poisoning cases presenting to UK emergency departments involve a BDZ compound. For example, a survey of six emergency departments showed that 15% of people over the age of ten years presenting for poisoning had taken a BDZ either alone or in combination with other drug (Thomas et al., 1996).

In overdose, BDZs are commonly regarded as safe and not usually fatal. However, if ingested with other psychotropic drugs and/or alcohol, as is common in self-poisoning (Michel et al., 1994 Neeleman & Wessely, 1997; Schmidt & Dalhoff, 2002), the effects of BDZs can potentiate the depressant effects of other substances on the central nervous system (Bayer et al., 1992), and may induce coma and even death (Litovitz et al., 1991).

It is important to note that BDZs are used as frequently in completed suicides as in non-fatal overdose, and in both cases benzodiazepines are usually taken in combination with other psychotropic drugs and/or alcohol (Michel et al., 1994).

Mixed overdoses resulting in coma (Glasgow Coma Score – GCS - <= 8) pose a considerable challenge to emergency physicians (Weinbrom et al., 1996), particularly to inexperienced junior doctors. Establishing the likely cause(s) of coma often proves difficult, and the urgent need to sustain adequate ventilation often requires endotracheal intubation and admission to high dependency wards or intensive care facilities. Although the estimated costs in the UK for the inpatient treatment of people following BDZ overdose are unknown, the cost of admission to intensive treatment (ITU) or high dependency units for any reason is considerable, usually between £1K and £2K per day. In the study by Kapur et al. (2002) inpatient medical care accounts for 31% of the total cost of self-poisoning; days in ITU account for 21% of the total cost.

The anxiolytic and sedative effects of benzodiazepines are mediated through a specific part of a gamma-amino-butyric acid (GABA) receptor (now called...
the benzodiazepine receptor), effects which are specifically and competitively antagonised by flumazenil, a 1, 4 imodazobenzodiazepine compound showing little if any agonist properties (Weinbroum et al., 1996).

Flumazenil is well absorbed from the gastro-intestinal tract but undergoes extensive first-pass hepatic metabolism, giving a specific bioavailability of 20%. When used intravenously it is rapidly and effectively metabolised (to an inactive carboxylic acid form), with an elimination half-life of 40-80 minutes (See Summary of Product Characteristics/Electronic Medicines Compendium, eMC: www.emc.vhn.net). Since most benzodiazepines have a longer duration of action than flumazenil, the sedative effects of benzodiazepines will re-emerge in a relatively short period of time following the administration of IV flumazenil. Repeat intravenous injections or infusions may thus be needed (Wienbroum et al., 1991).

Care should be taken in the administration of flumazenil in benzodiazepine-dependent people, as there are suggestions that this may precipitate acute withdrawal, and in people with epilepsy in whom flumazenil may induce convulsions (BNF, 2003).

7.10.2 Current practice
Since the late 1980s/early 1990s flumazenil has been licensed in most countries for the reversal of the sedative effects of benzodiazepines used in anaesthetic, intensive care and diagnostic procedures (BNF 44, January 2003). In some countries, including the USA, Sweden and Australia, flumazenil is also licensed for use in the diagnosis and treatment of benzodiazepine overdose. However, in the UK flumazenil has not been licensed for use in benzodiazepine overdose, either diagnostically or therapeutically, as a result of concerns regarding its potential to cause serious and unpleasant adverse effects in this particular circumstance, and the specific risk of re-sedation resulting from the pharmacokinetic properties of flumazenil.

7.10.3 Studies considered
No existing systematic review of the use of flumazenil in benzodiazepine overdose was available, so a new review was undertaken. Of the 1,177 papers identified following a systematic search of electronic databases for the treatment of overdose, thirteen were considered relevant to the management of suspected BZD overdose with flumazenil, with eight satisfying the

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13 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
14 Here and elsewhere in the guideline, each study considered for review using meta-analysis is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, when a date is not used). Information about included studies is included in Appendix 17, which also includes a list of excluded studies together with reasons for exclusion. Full references to studies reviewed are in Appendix 18.
inclusion criteria set by the GDG (BAYER1992, HOJER1988, HOJER1990, KNUDSON1988, LHEUREUX1988, O’SULLIVAN1987, SPIVEY1992, WEINBROUM1996). The majority of studies considered for inclusion were from countries other than the UK. The included studies were of patients admitted to emergency departments or intensive care units (ICUs) with severely impaired consciousness following suspected overdose either of benzodiazepines alone or in combination with other substances. Studies employed a range of exclusion criteria, most commonly pregnancy or severe organic illness.

Only post-treatment scores on the Glasgow Coma Scale (GCS) and adverse reactions were extractable from sufficient studies to undertake meta-analyses. Of the 8 studies included, data were available for meta-analysis of mean end-point GCS scores from 125 patients extracted from three of the studies (HOJER1988, LHEUREUX1988 and O’SULLIVAN1987). For analysis of all adverse reactions five studies (BAYER1992, HOJER1990, KNUDSON1988, SPIVEY1992, WEINBROUM1996) provided data on 663 patients, whilst analysis of physical adverse reactions included data on 493 patients extracted from four studies (BAYER, HOJER1990, KNUDSON1988, WEINBROUM1996).

Extractable outcomes reported by single studies included number of patients regaining consciousness (WEINBROUM1996), and the number of patients scoring 1 or 2 on the Global Clinical Improvement (GCI) scale (BAYER1992).

### 7.10.4 Evidence statements

*Effect of treatment on efficacy outcomes*

Flumazenil substantially improves the level of consciousness in patients who are unconscious or have marked impairment of consciousness following a suspected benzodiazepine overdose when compared to placebo, and significantly increases the likelihood of improving consciousness to a level where the patient can protect his or her own airway and sleep off the effects of the overdose safely (a GCS score greater than ten).

- There is strong evidence suggesting that there is a clinically significant difference favouring flumazenil over placebo on improving the level of consciousness (as measured by the GCS) in patients with suspected benzodiazepine poisoning admitted to A&E or ICU either unconscious or with marked impairment of consciousness (mean baseline GCS scores between 6.5 and 12.5 or less) (N=3; n=125; SMD = -0.93, 95% CI -1.31 to -0.56).

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15 Forst plots are available in Appendix 19. All evidence statements are from level 1 evidence.
There is limited evidence suggesting that there is a clinically significant difference favouring flumazenil over placebo on the number of patients with suspected benzodiazepine poisoning who respond to treatment as measured by a GCI scale score of 1 or 2 (N = 1; n = 180; RR$^{16} = 0.27$; 95% C.I., 0.18 to 0.39; NNH = 2; 95% C.I., 1 to 2).

There is limited evidence suggesting that there is a clinically significant difference favouring flumazenil over placebo on the number of patients with suspected benzodiazepine poisoning regaining consciousness$^{17}$ (N=1; n=31; RR$^{18} = 0.19$; C.I., 0.07 to 0.54; NNH=2; 95% C.I., 1 to 2).

**Tolerability of treatment**

Flumazenil-treated patients experienced substantially more total adverse reactions compared to placebo:

There is strong evidence suggesting that flumazenil, when compared to placebo in unconscious/markedly impaired consciousness patients with suspected benzodiazepine poisoning, significantly increases the likelihood of experiencing a greater total number of adverse reactions than those treated with placebo, and that this difference is clinically significant (N = 5; n = 663; RR = 2.27, 95% CI 1.63 to 3.18).

When psychological and behavioural symptoms normally suppressed by benzodiazepines (agitation, depressed mood, anxiety, abnormal crying, restlessness and aggression) are removed from the analysis, patients treated with flumazenil nevertheless experience more adverse effects compared to those treated with placebo. Physical symptoms included for analysis were: sudden change in blood pressure, convulsions, nausea/vomiting, redness/pain at injection site, headache, tachycardia, dizziness, hot flushes, shivering and salivation.

There is limited evidence suggesting that flumazenil, when compared to placebo in unconscious/markedly impaired consciousness patients suspected of benzodiazepine overdose, increases the likelihood of adverse physical reactions significantly more than placebo (N = 3; n = 601; RR = 5.55, 95% CI 0.98 to 31.30).

The most serious adverse effects (convulsions, death and sudden drop in blood pressure) reported in these studies occurred at a relatively low rate, and in relatively few patients, making interpretation of the data uncertain. However, of the 3 patients reported as suffering convulsions, 2 developed

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$^{16}$ For statistical purposes, the RR is framed in terms of non-response.

$^{17}$ Defined in the study as being fit for extubation – ie being fully awake, obeying verbal commands, communicating with medical staff and with all hemodynamic and respiratory parameters within normal ranges.

$^{18}$ For statistical purposes, the RR is framed in terms of not regaining consciousness.
convulsions both before and after administration of flumazenil, and all 3 had taken mixed benzodiazepine overdoses: one acetaminophen, propoxyphene and a benzodiazepine; in the other two patients, benzodiazepines were mixed with tricyclic antidepressants (doxepin and amitriptylline). Case reports confirm that flumazenil may provoke serious reactions and death if administered to patients who have also taken significant quantities of tricyclic antidepressants (e.g. Haverkos et. al., 1994).

There was insufficient evidence to determine the relationship between dose of flumazenil administered and the incidence of all adverse effects or the incidence of more serious ones.

7.10.5  Clinical summary
Overall, there is good evidence that flumazenil substantially improves the level of consciousness in patients with markedly impaired consciousness/unconscious who are suspected to have self-poisoned with benzodiazepines. However, substantial numbers of benzodiazepine-overdose patients treated with flumazenil experience a wide range of side effects although the event rate for serious side effects is too low to determine if these are caused by the administration of flumazenil, rather than resulting from the combination of drugs ingested. Nevertheless, flumazenil may provoke serious adverse reactions when benzodiazepines have been ingested with tricyclic antidepressants.

7.10.6  Clinical practice recommendations

7.10.6.1 In patients who are unconscious or showing marked impairment of consciousness in which self-poisoning with a benzodiazepine is suspected, flumazenil should be considered as a diagnostic tool. [A]

7.10.6.2 When a positive diagnosis of self-poisoning with a benzodiazepine has been made, the possibility of mixed overdose should be considered and investigated if necessary at the earliest opportunity. [GPP]

7.10.6.3 In unconscious patients in whom self-poisoning with a benzodiazepine is suspected, and the concomitant ingestion of significant amounts of tricyclic antidepressants has been excluded, flumazenil should be considered as a therapeutic option, especially for patients for whom an improved level of consciousness is considered as a clinical priority, such as those who also have consumed other CNS depressants, including alcohol. [A]
7.10.6.4 When the decision to administer flumazenil has been taken, the clinical team should specifically monitor and document the side effects known to occur with flumazenil, especially physical reactions such as convulsions. [A]

7.10.6.5 Flumazenil should be used only in the diagnosis or treatment of benzodiazepine overdose when full resuscitation equipment is immediately available. [GPP]

7.10.6.6 Given the relatively high incidence of adverse psychological events experienced by patients following administration of flumazenil, the minimum effective dose should be used and only for as long as it is clinically necessary. [B]

7.10.7 Research recommendations

7.10.7.1 An adequately powered national multi-centre RCT, reporting all relevant clinical outcomes, to evaluate the therapeutic use of flumazenil in unconscious patients in whom self-poisoning with benzodiazepines is suspected. Particular attention should be paid to the incidence of serious physical adverse events, dose and the ingestion of other substances.

7.11 Treatment and management of opioid overdose

7.11.1 Introduction
Naloxone is a specific opioid receptor antagonist with little or no agonist properties (Martin, 1976). Naloxone is recommended in the emergency treatment of poisoning with opioids, including that with dextropropoxyphene (see BNF 2003, p 23). It is poorly absorbed orally and therefore only used parenterally. It has a shorter half-life compared to most opiates.

7.11.2 Current clinical practice
Naloxone is a drug specifically developed for the treatment of opioid overdose and is indicated for the reversal of the CNS depressant effects of opioid drugs in a number of settings, including in accidental or intentional self-poisoning, and in opioid-induced respiratory depression or coma during anaesthesia or analgesia (See Summary of Product Characteristics/Electronic Medicines Compendium, eMC: www.emc.vhn.net).

Its preferred route for administration is by intravenous injection (IV), although intramuscular and subcutaneous routes can be used if IV routes are unavailable (BNF 2003). Its short duration of action may produce only a brief reversal of the effects of opioids, and may therefore need repeated doses or
continuous intravenous infusion. Its use in opioid overdose can save lives and reduce the need for intensive care or the use of high dependency units.

A specific danger in the use of naloxone to reverse opioid overdose exists when the patient is dependent on opioids. In these circumstances, naloxone can rapidly precipitate acute withdrawal symptoms with sometimes, extreme behavioural reactions, including violence.

Additionally, in the treatment of co-proxamol overdose, patients should be treated for both opiate and paracetamol overdose. Given that overdose of co-proxamol has a high mortality rate (Hawton et al., 2003), and that co-proxamol was reported to the NPIS London Centre over 7,000 times in 2001, representing 4% of all poisons cases reported that year, consideration should be given to either discontinuing, or at least increasing the restrictions upon, the prescription of co-proxamol.

7.11.3 Studies reviewed

No existing systematic review of the use of naloxone in opioid overdose was available. A search of electronic databases yielded 123 studies, of which two were identified as potentially relevant (GARCES1993A, KAPLAN1999). Both failed to meet the inclusion criteria set by the GDG. GARCES1993A used a patient population excluded by the guideline scope, and KAPLAN1999 used a comparator treatment not licensed in the UK (nalmefene).

Nevertheless, Evans et al. (1973) demonstrated the efficacy and specificity of action of naloxone in 9 patients following opioid overdose compared to 13 patients following non-opioid CNS depressant overdose. Naloxone resulted in recovery of consciousness within 1 to 2 minutes following administration in all 9 patients with opioids, but not in the 13 patients with other CNS depressants. In 6 of the patients in the opioid group it was also possible to demonstrate that naloxone reverses the respiratory depressant effects of opioid overdose. Given the rapid onset of action of naloxone in restoring consciousness and revering respiratory depression caused by opioids, further extensive trials have not been performed and are rightly considered unnecessary (Meredith et al., 1993).

A number of more recent studies have demonstrated the antagonist effects of naloxone on a wide range of opioids in different clinical contexts (for example, see Amin et al., 1995; Meissner et al., 2003). Searches confirmed that

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19 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.

20 Here and elsewhere in the guideline, each study considered for review using meta-analysis is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, when a date is not used). Information about included studies is included in Appendix 17, which also includes a list of excluded studies together with reasons for exclusion. Full references to studies reviewed are in Appendix 18.
no formal efficacy trial of naloxone in the treatment of opioid overdose was available, a finding confirmed by the manufacturers.

**7.11.4 Clinical summary**
Naloxone, as a specific opiate antagonist, is widely accepted as the drug of first choice in the reversal of opiate overdose. No efficacy data derived from RCTs could be found to support this, although there is little doubt that naloxone is effective in this context. Its short half-life can present difficulty when used in the reversal of longer acting opioids.

**7.11.5 Clinical recommendations**

7.11.5.1 Naloxone should be used in the treatment of opioid overdose. [B]

7.11.5.2 When using naloxone in the treatment of opioid poisoning, regular monitoring of vital signs should be undertaken routinely until the patient is able to remain conscious with adequate spontaneous respiration unaided by the further administration of naloxone. (GPP)

7.11.5.3 A minimum safe dose of naloxone should be used to reverse respiratory depression caused by opioids but to prevent the patient becoming agitated. [C]

7.11.5.4 When reversing the effects of long-acting opioids, such as methadone, the use of an intravenous infusion should be considered and the level of consciousness monitored regularly. [C]

7.11.5.5 When reversing the effects of opioid overdose using naloxone in people who are dependent upon opioids, naloxone should be given slowly and preparations made to deal with possible withdrawal effects, especially agitation, aggression and violence. (GPP)

7.11.5.6 Consideration should be given to preventing or reducing the prescription of co-proxamol, especially for people who are at risk of self-harm. (GPP)

**7.11.6 Research recommendations**

7.11.6.1 An adequately powered RCT comparing naloxone with placebo and supportive care in patients following opiate overdose should be undertaken, paying particular attention to the effects in opiate dependent people, opiate non-dependent people and people taking mixed overdose. The trial should examine the dose ranges
7.12 The treatment and management of superficial wounds

7.12.1 Introduction
One modality of self-injury for which people who self-harm may seek treatment, is that of self-cutting, amounting to approximately one fifth of all emergency department attendances for self-harm, although cutting is much more common than self-poisoning in other settings (Hawton et al., 2002; Horrocks et al., 2003). Self-cutting may cause significant blood loss, infection, damage to vital structures and organs, or even death. When surgical intervention is required to treat an injury, the use of such treatment is not without its own risks. Longer-term sequelae include physical impairment and disability, scarring, disfigurement and a range of psychological problems (see 2.10 above).

Instruments used to self-harm by cutting include razor blades, ‘Stanley knives’, domestic and other knives, and broken glass. Injuries may be inflicted upon any part of the body, including the forearm, upper arm, neck, leg or chest. While the size of wounds varies enormously, the majority of those seen are small and superficial. However, cuts may be deep, penetrating the fascia and sometimes involving deeper structures such as tendons, vessels and nerves. Injuries may be multiple or single, and incised or contused depending upon the type of instrument used.

Following full medical and surgical assessment of the person who has self-harmed by ‘cutting’, complex wounds involving tissues and structures below the fascia will need surgical exploration, with appropriate referral for specialist interventions beyond the scope of this guideline. However, superficial and uncomplicated wounds can be closed relatively simply using a number of different methods, such as tissue adhesive (glue), skin closure strips (‘steristrips’), sutures and staples.

This section will examine the evidence base for the different methods of wound closure for superficial and uncomplicated self-inflicted injuries in terms of acceptability, wound healing/complications, pain and appearance. In addition, key elements in the overall management of self-injury such as wound assessment, wound cleaning, anaesthesia and pain relief will be addressed as good practice points.
7.12.2 Current practice
In the management of superficial uncomplicated wounds of whatever cause, sutures, skin closure strips and tissue adhesive have become the established alternatives. A number of different types of tissue adhesive are available (1-Octylcyanoacrylate, 2-
N-Cyanoacrylate and 1 N-Butylcyanoacrylate), all of which are used in the same way, either alone in the closure of minor wounds, or for additional suture support in more complex injuries (see 13.10.5 BNF).

Skin staples, sometimes used for surgical wound closure in other settings, such as following surgery to the thyroid gland, are not used in the treatment of superficial self-inflicted wounds as removal in a primary care setting can prove problematic.

7.12.3 Studies considered
No systematic reviews or RCTs evaluating the use of wound sutures, tissue adhesive or skin closure strips in the management of wound closure specifically following self-harm could be identified. Searches were then directed towards studies of superficial wound closure for traumatic and surgical wounds not specifically caused by self-harm.

An existing systematic review of uncomplicated wound closure not caused by self-harm was located (Farion et al., 2003). However, since it used several data extraction and statistical methods unsuitable for the development of this guideline, it was not used.

The NCCMH team therefore carried out a new systematic search. Of 765 studies retrieved, 22 were considered for inclusion and 13 satisfied inclusion criteria, providing data on 1,800 patients/wounds. Eight RCTs compared the use of tissue adhesive and suturing (BARNETT1998, BRUNS1996, JAIBAJI2000, KARCIOGLU2002, QUINN1993, QUINN1997, SCHULTZ1979, SINHA2001), two studies compared tissue adhesive with ‘standard wound closure’ (i.e. the comparator treatment could include sutures, staples or skin closure strips, as determined by the treating clinician) (BRUNS1998; SINGER2002), two compared a tissue adhesive with skin closure strips (MATTICK2002; ZEMPSKY2001) and one compared two different tissue adhesives (OSMAND1999).

Included studies varied in terms of:

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21 Full details of the search strategies used here and elsewhere in the guideline are in Appendix 7.
22 Here and elsewhere in the guideline, each study considered for review using meta-analysis is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, when a date is not used). Information about included studies is included in Appendix 17, which also includes a list of excluded studies together with reasons for exclusion. Full references to studies reviewed are in Appendix 18.
7.12.4 Evidence statements

7.12.4.1 Tissue adhesive versus suture and ‘standard wound care’: complications

When compared to the use of sutures in superficial wound closure, tissue adhesives are associated with no greater incidence of complications 1 to 3 months after treatment. However, when compared to all other methods of wound closure (suture, staple or skin closure strips: ‘standard wound care’), tissue adhesive is equally likely to cause complications as ‘standard wound care’, both at one week and at 1 to 3 months post-treatment follow-up.

- There is insufficient evidence to determine if there is a statistically significant difference between glue and suture on reducing the likelihood of complications at 1 week follow-up in patients with minor wounds (N = 3; n = 400; RR = 0.85; 95% C.I., 0.62 to 1.16)

- There is evidence suggesting that there is no clinically significant difference between glue and suture on reducing the likelihood of complications at 1-3 months follow-up in patients with minor wounds (N = 3; n = 1111; RR = 0.93; 95% C.I., 0.77 to 1.14)

- There is insufficient evidence to determine if there is a statistically significant difference between glue and suture on reducing the likelihood of complications at 8-18 months follow-up in patients with minor wounds (N = 1; n = 37; RR = 2.11; 95% C.I., 0.44 to 10.15)

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23 Forest plots are available in Appendix 19. All evidence statements are from level 1 evidence.
There is evidence suggesting that there is no clinically significant difference between tissue adhesive and ‘standard wound care’, in patients with minor wounds, on reducing the likelihood of complications at one week post-treatment (N = 1; n = 924; RR = 1.34; 95% C.I., 0.92 to 1.94)

There is evidence suggesting that there is no clinically significant difference between tissue adhesive and ‘standard wound care’ on reducing the likelihood of complications in patients with minor wounds at 1 to 3 months post-treatment (N = 2; n = 1009; RR = 0.91; 95% C.I., 0.74 to 1.13)

7.12.4.2 Acceptability of tissue adhesive versus suture and ‘standard wound care’: pain and dissatisfaction with treatment

Tissue adhesives appear to be less likely than sutures to cause pain in children as rated by parents or professionals, and adults are significantly less likely to be satisfied with the method of suture than with adhesives. This is also confirmed when comparing tissue adhesive with ‘standard wound care’ in adults. However, by 5 to 10 days post treatment, there appears to be no difference between tissue adhesives and ‘standard wound care’ with regard to reported pain:

• There is limited evidence suggesting that there is a clinically significant difference favouring tissue adhesive over suturing with the parent rating less pain during the procedure in children with minor wounds (N = 1: n = 163; WMD = -13.3; 95% C.I., -21.43 to -5.17)

• There is limited evidence suggesting that there is a clinically significant difference favouring tissue adhesive over suturing with the doctor rating less pain during procedure in children with minor wounds (N = 1; n = 163; WMD = -12.6; 95% C.I., -20.06 to -5.14)

• There is limited evidence suggesting that there is a clinically significant difference between tissue adhesive and suturing with the nurse rating less pain during procedure in children with minor wounds (N = 1; n = 163; WMD = -14.9; 95% C.I., -22.5 to -7.3)

• There is limited evidence suggesting that there is a clinically significant difference between tissue adhesive and suturing with fewer patients with minor wounds receiving tissue adhesive expressing dissatisfaction with the treatment (N = 1; n = 52; RR = 0.12; 95% C.I., 0.02 to 0.85)

• There is evidence suggesting that there is no clinically significant difference between tissue adhesive and ‘standard wound care’ on the pain experienced at 5-10 days post-treatment (N = 1; n = 924; RR = 0.92; 95% C.I., 0.72 to 1.18)
Tissue adhesive versus suture and ‘standard wound care’: cosmetic appearance

Tissue adhesives are no more likely to produce an optimal cosmetic outcome than either sutures or ‘standard wound care’. However, there was some limited evidence to suggest that, although the differences are small, tissue glue produced a better cosmetic outcome than sutures. There was insufficient evidence to determine if there was any difference between tissue glue and sutures on either overall cosmetic result or on the width of resulting scar tissue:

- There is insufficient evidence to determine if there is a clinically significant difference between glue and suturing on achieving an optimal cosmetic score at 1 week post-treatment in patients with minor wounds (N = 1; n = 136; RR = 1.04; 95% C.I., 0.67 to 1.61)

- There is insufficient evidence to determine if there is a clinically significant difference between glue and suturing on achieving an optimal cosmetic score at 3 months post-treatment in patients with minor wounds (N = 1; n = 136; RR = 0.9; 95% C.I., 0.61 to 1.33)

- There is insufficient evidence to determine if there is a clinically significant difference between glue and suturing on the likelihood of wounds not achieving an optimal cosmetic score at 1 year post-treatment in patients with minor wounds (N = 1; n = 136; RR = 1; 95% C.I., 0.76 to 1.31)

- There is limited evidence suggesting that there is a clinically significant difference between tissue adhesive and suturing, in patients treated with minor wounds, with wounds treated with tissue adhesive having better visual analogue cosmesis scores at 10 days post-treatment (N = 1; n = 52; WMD = -7.74; 95% C.I., -12.78 to -2.7)

- There is limited evidence suggesting that there is a clinically significant difference between tissue adhesive and suturing, in patients with minor wounds, with wounds treated with tissue adhesive having better visual analogue cosmesis scores at 3 months post-treatment (N = 1; n = 52; WMD = -7.44; 95% C.I., -14.54 to -0.34)

- There is insufficient evidence to determine if there is a clinically significant difference between tissue adhesive and suturing on visual analogue cosmesis score of the wound at 1 year post-treatment (N = 1; n = 77; WMD = 0; 95% C.I., -7.72 to 7.72)

- There is insufficient evidence to determine whether there is no clinically significant difference between glue and standard care on the likelihood of wounds not having optimal cosmesis at 3 months post-treatment in
patients with minor wounds (N = 1; n = 924; RR = 0.89; 95% C.I., 0.7 to 1.13)

- There is insufficient evidence to determine if there is a clinically significant difference between glue and standard care on visual cosmesis of the wound at 3 months post-treatment in patients with minor wounds (N = 1; n = 116; WMD = -1.3; 95% C.I., -8.03 to 5.43)

- There is insufficient evidence to determine if there is a clinically significant difference between tissue adhesive and suturing on the mean width of the scar (N = 1; n = 37; WMD = -0.6; 95% C.I., -2.62 to 1.42).

7.12.4.4 Tissue adhesive versus skin closure strips

There was insufficient evidence to determine if there was a clinically significant difference between tissue adhesive (‘Dermabond’) and adhesive strips (“Steristrips”) in terms of number of complications, acceptability, or cosmetic appearance:

- There is insufficient evidence to determine if there is a clinically significant difference between tissue adhesive and steristrips on the number of complications in patients with minor wounds (N = 1; n = 68; RR = 0.18; 95% C.I., 0.02 to 1.39)

- There is insufficient evidence to determine if there is a clinically significant difference between tissue adhesive and steristrips on the number of patients with minor wound leaving the study early (N = 1; n = 60; RR = 4; 95% C.I., 0.47 to 33.73)

- There is insufficient evidence to determine if there is a clinically significant difference between tissue adhesive and steristrips on the visual cosmesis of the wound as rated by the surgeon (N = 2; n = 102; Random effects WMD = -2.86; 95% C.I., -11.15 to 5.42)

7.12.4.5 Tissue adhesives: Which tissue adhesive?

Searches identified only one eligible head-to-head trial of different tissue adhesives: Histoacryl blue versus ‘Dermabond’. There was insufficient evidence to determine if there was any difference in terms of complications, cosmetic result or time to repair between the two types of tissue adhesive:

- There is insufficient evidence to determine if there is a clinically significant difference between Histoacryl Blue and Dermabond on the number of wounds with complications at 10-15 days post-treatment (N = 1; n = 94; RR = 1.8; 95% C.I., 0.65 to 4.97)
There is insufficient evidence to determine if there is a clinically significant difference between Histoacryl Blue and Dermabond on the visual cosmesis of the wound at 3 months post-treatment follow up (N = 1; n = 94; RR = 0.89; 95% C.I., 0.68 to 1.15)

There is insufficient evidence to determine if there is a clinically significant difference between Histoacryl Blue and Dermabond on the time to repair the wound (N = 1; n = 94; WMD = 0.2; 95% C.I., -1.13 to 1.53)

7.12.5 Clinical summary
In the treatment of superficial wounds, tissue adhesives are as effective as sutures and ‘standard wound care’, causing less pain and dissatisfaction with the treatment in both adults and children. Although evidence is contradictory, tissue adhesive may produce a marginally better cosmetic result, although this is unlikely to be significant in the long term. The evidence available is insufficient to determine if tissue adhesive is any better or worse than skin closure strips, or if any type of tissue adhesive is better than any other.

7.12.6 Clinical practice recommendations

7.12.6.1 In the treatment and management of injuries caused by self-cutting appropriate physical treatments should be provided without unnecessary delay irrespective of the cause of the injury. [GPP]

7.12.6.2 If the treatment of self-harm by cutting requires the use of sutures or other painful interventions, adequate anaesthesia should be ensured before an intervention is initiated. [GPP]

7.12.6.3 In the treatment and management of people with injuries caused by self-cutting, clinicians should take full account of the additional distress and emotional disturbance experienced by those who self-harm, especially immediately following injury and at presentation for treatment. [GPP]

7.12.6.4 In the treatment and management of superficial uncomplicated injuries of 5cm or less in length, the use of tissue adhesive should be considered as a first-line treatment option. [A]

7.12.6.5 In the treatment and management of superficial uncomplicated injuries of 5cm or less in length, if the service user expresses a preference for the use of skin closure strips, this should be offered as an effective alternative to tissue adhesive. [B]
7.12.6.6 In the treatment and management of superficial uncomplicated injuries of greater than 5cm, or deeper injuries of any length, wound assessment and exploration, in conjunction with a full discussion of preferences with the service user, should determine the appropriate physical treatment provided. [GPP]

7.12.6.7 Before initiating treatment for self-injury, the clinician should provide the service user, and carers where appropriate, with sufficient information regarding treatment options for the service user to fully participate in joint clinical decision making. [GPP]

7.12.6.8 For people presenting for treatment who have a history of self-harm, clinicians may consider offering advice and instructions for the self-management of superficial injuries, including the provision of tissue adhesive. Discussion with an involved mental health worker may assist in the decision about which service users should be offered this treatment option. [GPP]

7.12.6.9 Where service users are likely to repeat self-injury, clinical staff, service users and carers may wish to discuss harm minimisation issues/techniques. Suitable material is available from many voluntary organisations. [GPP]

7.12.6.10 Where service users are likely to repeat self-injury, clinical staff, service users and carers may wish to discuss appropriate alternative coping strategies. Suitable material is available from many voluntary organisations. [GPP]

7.12.6.11 Where service users have significant scarring from self-injury, consideration should be given to providing information about dealing with scar tissue. [GPP]

7.12.7 Research recommendations

7.12.7.1 Adequately powered RCTs, reporting all relevant short-, medium- and long-term outcomes, including the experience of care and the acceptability of treatments, are needed to evaluate methods of wound closure for people who have self-harmed through cutting. For superficial wounds this should include trials comparing skin closure strips and tissue adhesives, and head to head trials of the cost and clinical effectiveness of different types of tissue adhesive.

7.12.7.2 Appropriately designed studies to evaluate the place of self-management of wound closure for people who recurrently self-harm by cutting, identifying those for whom this approach would be most suited, should be undertaken.
7.12.8 General research recommendation

7.12.8.1 Research, using and combining a range of methods, should be conducted to examine the impact of “service-level” interventions on the process and outcomes achieved by services for people who self-harm. The service-level interventions to be studied include: the introduction of staff training; models of service provision that involve close working between A&E and mental health services; and rapid assessment and treatment of people who self-harm.
8 Psychosocial assessment after hospital attendance for self-harm

8.1 Introduction
For at least 25 years (Department of Health and Social Security, 1984) it has been NHS policy that everybody who attends hospital after self-harm should receive a psychosocial assessment. While there are several components of psychosocial assessment, two main themes are discernable in the literature describing its possible content and purpose: they are the assessment of needs and the assessment of risks. The assessment of needs is designed to identify those personal (psychological) and environmental (social) factors that might explain an act of self-harm; this assessment should lead to a formulation, based upon which a management plan can be developed. The assessment of risk is designed to identify those factors that predict poor outcomes – it has been particularly applied to the identification of risks for subsequent repetition of self-harm or of suicide. Its aim is to ensure that any management plan is modified to take into account the need to minimise risk, and to ensure that aftercare is offered especially to those at most risk. Clearly, to separate these two aspects of assessment for ease of description is artificial in practice.

Despite the importance of comprehensive assessment following an act of self-harm many service users ‘fall through the net’. In many hospitals, more than half of attenders are discharged from the emergency department, many the specialists assess (Termansen & Bywater, 1975; Thomas et al., 1996; Kapur et al., 1998); Patients who leave hospital direct from emergency department, and especially those who leave without a psychosocial assessment, are less likely to have been offered follow up. (Owens et al., 1991; Suokas, 1991; Gunnell et al., 1996; Kapur et al., 1998)

The availability of properly trained health professionals able to undertake needs and risk assessments is compromised by the fact that most people who have self-harmed seek help at times when only an emergency service mental health is available.

About three quarters of episodes present to hospital in the evenings. In some hospitals such patients are admitted overnight, with a view to psychosocial assessment in the daytime. The proposed advantages of this policy are that the assessment will be of higher quality, and that aftercare arrangements are easier to arrange with the patient during office hours. Since the patient has consumed alcohol in about a half of episodes, (Merrill et al., 1992; Wylie et al., 1996) or his or her judgement may be impaired by the drugs ingested, this argument has some appeal, but it is not widely accepted.
Since assessment is a necessary precursor of any treatment, this chapter will review the current practice of needs and risk assessment, and the literature upon which this is based, for people who self-harm. Given the diversity of underlying causes and reasons for a person to self-harm, there is no widely accepted or standardised method with high predictive powers with broad application to all people who self-harm, that is, able to identify reliably and accurately the level of need for further psychological and psychiatric help. This is particularly so for risk assessment.

The following chapter will, therefore, also highlight the problems of needs and risk assessment, their somewhat artificial separation and suggest possible solutions. We will also consider who should undertake psychosocial assessment following an act of self-harm. Recommendations made will be based upon this review and, through informal consensus, drawing upon the collective experience of the GDG.

### 8.2 Literature review

The GDG approached the literature review for this section by concentrating on the question of risk assessment rather than that of needs assessment, for which there is no need for a formal review. To review the literature on risk assessment the GDG began by considering building its own measure of risk prediction. To support this the NCCMH review team undertook exploratory searches to assess the extent of the literature on individual predictive factors and on the specific predictive power of some of these factors. However, based on the results of these, the GDG took the view that this was too broad an approach given the wide range of possible predictive factors and their likely weak predictive power for a particular individual (see Section 7.5.3 below), and it decided to concentrate on evaluating existing formal measurement tools. Exploratory searches were undertaken to assess the range of available literature, including searching for studies testing the predictive power of three specific measures (Buglass & Horton, 1974; Kreitman & Foster, 1991; Patterson et al., 1983). No relevant study was identified, and no study comparing one assessment tool with another was found.

The GDG therefore decided to undertake a narrative review. This was prepared by a GDG member with extensive knowledge of this area, and then modified by consensus with the whole GDG. In addition, special advisers for children and the elderly were asked to contribute additional Good Practice Points regarding each population, highlighting differences from the general adult population who may self-harm.
8.3 The assessment of need

8.3.1 Current ‘Best Practice’

The first point of possible assessment for people who have self-harmed and attend an emergency department is at triage. A key issue at triage is to assess cognitive function and mental capacity, since further assessment is likely to be unreliable if a person’s cognitive function (especially orientation and attention span) or level of consciousness is impaired. If the drugs taken or alcohol intoxication have impaired the patient’s cognitive function, then much of the rest of the assessment is rendered unreliable or may be impossible to carry out.

Further immediate psychosocial assessment at triage should include an assessment of a person’s willingness to stay for further assessment and possible treatment, to consider the person’s levels of distress and to determine the possible presence of a mental illness. Recommendations regarding the overall approach to the physical and psychological elements of triage can be found in Chapter 7. From this early assessment, the level of urgency for psychosocial assessment can be quickly established.

Once it has been ascertained that the patient is mentally fit to participate in further assessment, the specific areas to cover following an act of self-harm, over and above mental state assessment, include the social context of the act, the personal characteristics of the individual and motivation for the act. The main components of assessment of need after self-harm, therefore include:

• social situation (including current living arrangements, work, and debt)
• personal relationships
• recent life events and current difficulties
• psychiatric history and mental state examination, including any history of previous self-harm and alcohol and drug use
• enduring psychological characteristics that are known to be associated with self-harm
• motivation for the act

Information about the psychiatric, social and psychological factors and contexts of the act can then be brought together into a formulation that describes the antecedents of the episode of self-harm. The formulation should therefore include:

• Long-term vulnerability factors include early loss or separation from parents, difficult relationships with parents signified by rejecting or overprotective parenting styles, or abuse in early life. Although sexual abuse has been highly associated with self-harm, emotional or physical abuse are also important.
• **Short-term vulnerability** includes current difficulties in relationships and lack of social support, work or health-related problems, or drug and alcohol misuse.

• **Precipitating factors** are likely to be stressors experienced in the few days immediately prior to self-harm. Again relationship problems, financial worry, anniversaries, deaths or other losses can act as precipitators to the act of self-harm.

### 8.3.2 Review of the evidence supporting current practice

The focus upon the social context of an act of self-harm, the personal characteristics of the individual who has self-harmed and the motivation behind the act, have been justified in a number of ways and on the basis of a range of epidemiological, social demographic and psychological studies.

#### 8.3.2.1 Social or environmental factors

In most cases, people report that they have taken an overdose in response to social problems (Brancroft et al., 1975). Common problems include difficulties with housing, unemployment (Platt & Kreitman, 1990), debt, poor personal health, and conflict or loss in personal relationships. Sixty-six percent of patients in one study (Milnes et al., 2002), and more of the males than of the females, recorded at least one problem that they believed to be insoluble; such problems were most often in the area of relationships. Patients who reported insoluble problems experienced higher levels of hopelessness and more suicidal intent. There was significant correlation between the number of insoluble problems and hopelessness, and between hopelessness and suicidal intent. However, there is some evidence that repetition of self-harm may occur despite resolution of personal problems (Sakinofsky & Roberts, 1990; Sakinofsky et al., 1990).

People who self-harm are more likely to be from social class V. However, the influence of employment status or social class is not clear cut. Compared to men who are employed, men who are unemployed are also more likely to be single, not live with their family, belong to a lower social class, or misuse drugs and have a criminal record. Socio-economic deprivation and social fragmentation may each make an independent contribution to self-harm rates, particularly in men (Gunnell, 1995).

#### 8.3.2.2 Psychological characteristics

In most services, about 30-40% of general hospital attenders are given a psychiatric diagnosis, and about a third have had prior contact with the psychiatric services. The commonest diagnosis is some form of depressive disorder. Probably a half to three quarters of people suffer from depression at the time of self-harm although only days after the episode depressive symptoms may have dropped substantially (Ennis et al., 1989). Alcohol dependence is diagnosed in about 10% of cases (Merrill et al., 1992; Suokas & Lonngquist, 1995; Wylie et al., 1996). Mental illnesses such as schizophrenia...
and bipolar disorder are diagnosed at the time in less than 10% of episodes of self-harm.

Enduring psychological characteristics associated with self-harm include: hopelessness (Cullberg et al., 1988), which as a character trait may occur independently of depression; hostility to others; antisocial behaviour (Suokas & Lonnqvist, 1995); and deficient problem-solving abilities (Schotte & Clum, 1987). Repeated self-harm is associated with difficulties with regulation of emotion and behaviour (Linehan et al., 2000).

Those who self-harm score higher on impulsiveness than would be expected from the normal population, and after controlling for age effects those who repeat self-harm are more impulsive than those who have self-harmed once only Hawton & Blackstock, 1976).

When dealing with a difficult situation dichotomous thinking makes it difficult to identify options or to see how the situation might change. This cognitive rigidity leads to problem-solving difficulties and patients who self-harm have more passive problem-solving styles than other patients, with solutions being less versatile and less relevant to the problem (Ennis et al., 1989).

Beck’s research group in the 1970s found that, while depression and hopelessness are related to suicidal intent, the relation between depression and suicide disappears when accounting for hopelessness; perhaps hopelessness is the link between depression and suicide. In their later studies they found that suicidal behaviour was better predicted by hopelessness than by depression; they followed up patients with suicidal ideation and found that of the patients who eventually killed themselves 90% had a hopelessness score greater than 9 (Beck & Kovacs, 1975; Beck and Kovacs, 1985; Beck et al., 1993).

Poor problem-solving ability is linked to deficits of autobiographical memory. When asked to generate specific memories in response to given cue words, those who self-harm tend to respond with general memories, rather than specific ones. Thus when life stresses arise people who have rigid styles of thinking cannot deal with the situation effectively. These psychological characteristics may arise in response to (and interact with) social and personal deprivation. This then leads to hopelessness, which increases the risk of self-harm. Hopelessness and poor problem-solving ability may however act independently of each other to increase risk (Williams et al., 2000).

8.3.2.3 Motivation
Suicidal intent is the degree to which the subject wished to die at the time of the act. It is difficult to assess, because most people are ambivalent and because reported intent may change fairly quickly (Salter & Platt, 1990).
most widely used standardised measure is the Suicide Intent Scale (Beck et al., 1974), which assesses the circumstances of the act (such as planning and attempts to avoid rescue) and the subject’s reported intention to die. Suicidal intent is positively (but weakly) associated with the medical seriousness of the act (Hawton & Catalan, 1987).

Motivation, other than the desire to die, may be assessed by asking the patient or by inference from the circumstances. Examples include a desire to communicate distress, to obtain temporary escape from intolerable worries, to effect a change in the behaviour of another person, or to express another emotion such as anger. According to the affect regulation model (Suyemoto, 1988) the act of self-harm allows expression of emotions that the individual can no longer tolerate. An example might be anger that is directed towards the self, so as to prevent it from being directed at and destroying the person to whom the anger is felt. It is important to reiterate that there are no widely used standardised measures of these other motivations and the assessment of motivation therefore, needs to be based on a judgement formed at the time of assessment.

8.4 The assessment of risk

8.4.1 Introduction
The use of risk assessment for people following an act of self-harm has the aim of predicting the likelihood that a person who has self-harmed will repeat the act, either fatally or non-fatally. In addition, once an estimate of risk has been arrived at, the assessment should also lead to an intervention designed to reduce that risk. A number of features are used to predict repetition or eventual suicide after an episode of self-harm. They fall into three categories:

- Characteristics of the act of self-harm: for example its medical seriousness; use of violent methods; evidence of planning or precautions taken to prevent rescue

- Characteristics of the person: for example mental illness; psychological attributes such as hopelessness; age; gender; criminality

- Circumstances of the individual: for example social class; physical illness; recent bereavement or other cause of social isolation.

8.4.2 Current practice
Risk assessment measures may take the form of a single question – for example about intent to die at the time of the act – but they usually contain a selection of items, the most widely used of which are listed below (Greer & Bagley, 1971; Beck et al., 1974; Buglass & Horton, 1974; Morgan et al., 1976; Bancroft & Marsack, 1977; Beck & Kovacs, 1985; Wilkinson & Smeeton, 1987;

8.4.2.1 Risk Factors
The following risk factors are the most commonly reported risks for non-fatal repetition of self-harm (Owens et al., 1994; Hawton & van Heeringen, 2000)

- a history of self-harm prior to the current episode
- psychiatric history, especially as an inpatient
- current unemployment
- lower social class
- alcohol or drug-related problems
- criminal record
- antisocial personality
- uncooperativeness with general hospital treatment
- hopelessness
- high suicidal intent

It is worthy of note that these risk factors are different to the risk factors most commonly reported for completed suicide, but there is clearly some overlap. The risk factors most commonly reported for suicide are:

- older age
- male
- previous attempts
- psychiatric history (especially in-patient treatment)
- unemployment
- poor physical health
- living alone
- medical severity of the act – especially near-fatal self-harm
- hopelessness
- continuing high suicidal intent

8.4.2.2 Standardised measures of risk
Standardised measures based on these risk factors come in two main formats: combinations of demographic and clinical risk factors that are identified at interview and recorded on checklists, or individual psychological characteristics (such as hopelessness or depression) that are identified by self-report questionnaire. There are a substantial number of such scales (Lester, 1970; Burk et al., 1985; Cochrane-Brink et al., 2000) the more commonly used and reported in the suicide prevention literature are listed below:

- Risk of Repetition Scale (6 items; Buglass & Horton, 1974)
- Edinburgh Risk of Repetition Scale (11 items; Kreitman & Foster, 1991)
- Suicide Assessment Checklist (21 items; Rogers et al., 1994)
- Suicide Assessment Scale (20 items; Stanley et al., 1986)
8.4.3 Review of the evidence supporting current practice

The content of these standardised measures comes from a number of sources, including:

- Cross-sectional studies that compare the characteristics of self-harm populations and completed suicides. The assumption is that the more like the “average” suicide an individual is, then the more likely he or she is to become a suicide.
- Cross-sectional studies that compare self-harm populations to other psychiatric populations who have no history of self-harm. The assumption is that the more like the “average” self-harm patient an individual is, then the more likely he or she is to repeat the act.
- Cohort (follow-up) studies in which groups of patients are followed up after an act of self-harm, and factors present at the time of the act are assessed for their association with subsequent non-fatal self-harm or suicide.
- Cohort studies in which other populations – psychiatric patients for example - are followed up after assessment, and factors present at the recruitment are assessed for their association with subsequent non-fatal self-harm or suicide.

There are problems interpreting much of the literature on risk after self-harm. The majority of research in the area has been cross-sectional – for example one popular scale (SADPERSONS, Patterson, et al.) has not been validated in a cohort study. Surprisingly, some have argued that such a study would be unethical (Juhnke, 1994, also quoting others), but the results from cross-sectional validation may be misleading. Over half of all completed suicides, for example, are by people with no known history of self-harm (Tuckman & Youngman, 1963; Gunnell & Frankel, 1994) and it may be that risks in those who kill themselves after previous non-fatal acts are not the same as risks in those whose first self-harming act is fatal. We cannot assume that risks are evenly distributed across the whole population at risk, and that (for example) risk factors identified by comparing psychiatric populations to suicides will apply equally to those who kill themselves after an episode of non-fatal self-harm.

Even when a cohort design is used, findings obtained in one clinical population - such as psychiatric inpatients - may not apply to another, such as people who attend a general hospital after self-harm. This is true especially when the original population is a highly selected one. For example, an early study by Tuckman and Youngman (1963a & 1963b) was influential in
establishing clinical thinking about risk after self-harm; although their work was based on a cohort study, the subjects were recruited after making contact with the Philadelphia Police Department and their findings cannot be applied to contacts in UK Accident & Emergency Departments.

Many scales have had their psychometric properties evaluated only in the original population from which they were derived or (if not empirically derived) in only one study, with results not replicated in a second study (Burk et al., 1985). When replication is attempted the results may be disappointing. For example, when Resnick and Kendra (1973) attempted to validate the widely known scale of Tuckman and Youngman (1963a & 1963b) in a new population, they were unable to do so.

Since risk assessment scales are usually made up by aggregating different risk factors, it is not uncommon to find that different elements of the risk profile are discrepant. For example it is common to find that somebody with a number of long-term risk factors (age, alcohol dependence, poor social support) nonetheless undertakes an act of self-harm that in itself indicates little risk (low expressed suicidal intent; medically non-serious; immediate help-seeking). Few measures weight their component items (Kreitman & Foster, 1991), and those few follow-up studies that have modelled suicidal behaviour using multiple measures as predictors have not studied self-harm populations (e.g. Gutierrez et al., 2000)

Suicide is rare, and self-harm is therefore often used as a proxy. Thus predictors of non-fatal self-harm are assumed to be similar to those for suicide. However, since repetition of self-harm after a non-fatal act is common (some 15-20% in the first year, rising to 20-25% over longer-term follow-up) while suicide is relatively uncommon (0.5-1% in the first year, rising to 4-5% over longer-term follow-up) this assumption can be only partly true (Owens et al., 2002).

8.4.3.1 Can risk scales predict suicide?
One use to which risk assessment might be put, is to allow services to be targeted on those perceived as being at high risk of repetition or suicide. In this scenario, risk assessment is used as a means of defining those cases that will receive further specialist care. To follow this policy, we would need a measure that was able to split the self-harm population into high and low risk groups.

Scales to predict suicide have extremely weak predictive power, because the absolute risk of suicide is so low (Dennehy et al., 1996). High relative risks do not equate with high absolute risk because suicide is a relatively uncommon event. For example, the annual suicide rate in the general population is in the region of 10 per 100,000. A relative risk of suicide of 100 in the year following an episode of self-harm seems impressive (Hawton & Fagg, 1988), but it
means that as few as one in 100 self-harming individuals will die by suicide in the following year. Identifying this small proportion by conventional means of risk assessment is likely to be extremely difficult.

The study by Hjelmeland (2000) is a good example. Eventual suicide in a follow up study of self-harm patients was strongly associated with intent to die at the time of the act, as expressed at the time of assessment after the act. Indeed all the female suicides had expressed the intent to die at the time of the non-fatal act. The authors suggest this as an important risk factor for suicide. Unfortunately 584/925 (63%) of the original cohort expressed this intent and only 6 women died by suicide during follow up. In other words, nearly 99% of those who expressed this intent did not go on to kill themselves during the follow-up period.

It is possible to deal with the problem of missing cases by setting thresholds on a measure so that it has high sensitivity – the problem with low sensitivity being that repeats (non-fatal and fatal) occur as people slip through the net. Consequently, the tendency is to push up the sensitivity at the cost of specificity. The resulting problem then is of poor positive predictive value due to the combination of low specificity of the test and low prevalence of the predicted outcome.

8.4.3.2 Can risk scales predict repetition of self-harm?
Scales for prediction of repetition of non-fatal self-harm seem a better proposition, but unfortunately, their performance is not of as much practical value as might be hoped, for two main reasons.

First, self-harm repetition scales are not very accurate because the individual risk factors which constitute them, have poor positive predictive value. For example, in one study (Owens et al., 1991) of around 1000 patients, which found four of the above risk factors for repetition to be significantly commoner among those people who repeated, the best risk factor (past psychiatric contact) had a positive predictive value of only 21%. Adding the individual items to produce a composite risk score does not add sufficiently to this predictive value: the Edinburgh scale (Kreitman & Foster, 1991) reported a positive predictive value of only 24%.

Second, scores on risk of repetition scales show a positively skewed normal distribution; that is, they are not evenly distributed through the range but show an extended “tail” towards the high scores. As a consequence, the apparently good positive predictive value from a high score does not mean risk scales are accurate in predicting repetition for the whole population: although high scorers frequently repeat, only a few people score high, and most repeats arise from the much larger number of people at lower apparent risk. For instance, those identified as being at high-risk using the Edinburgh risk assessment scale (Kreitman & Foster, 1991) accounted for only 26% of
cases of future suicidal behaviour, the much larger 'low-risk' group accounting for the remainder.

Risk assessment therefore appears to be a useful means of identifying a small group of very high risk people – that is, people who have unusually high relative risks of further self-harm or suicide – while being too inaccurate to be used as a screening measure to allow services to be targeted on those whose risk is above a certain threshold.

8.5 Integrating risk and needs assessment

Given the problems of standardised risk assessment scales, a different approach has been debated within the literature (Rudd & Joiner, 1988; Motto, 1991). While it seems on the face of it a good idea to assess risk, all available risk assessment measures are too inaccurate for it to be reasonable to assume that somebody assessed at low risk is in fact safe. The logic of risk assessment (multi-determined risks, uncommon outcomes) tells us that it will not be possible to develop a new and highly accurate measure that will solve this problem. And in any case, there are many who would challenge the values implicit in restricting services solely to an aim of reducing repetition or suicide.

An alternative approach is to accept that risk lies on a continuum (Rose, 1992). Risk assessment serves to place an individual on that continuum, at the time of the assessment. Its main value is to influence the decision about urgency and intensity of intervention, rather than to determine the contents of (or even the offer of intervention). Additionally it can serve as a focus for discussing the person’s current attitude to their problems, and since risk may change it can be monitored to inform changes in the intensity of intervention. Thus most of the items that might appear in a risk assessment scale could be enquired about and dealt with accordingly by a needs assessment approach. A clear advantage in assessing risk in the context of a needs assessment approach is that the risks identified can be used to tailor further assessment of need, and the subsequent interventions to the individual in their particular circumstance, taking account of their past history. Some examples of how this could be done are given in Table 1 below.

<table>
<thead>
<tr>
<th>Factors that predict high risk of fatal or non-fatal repetition</th>
<th>Corresponding needs that might be identified during assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications of high intent</td>
<td>Need for close care and attention, perhaps including hospital admission Should be assessed by a reasonably senior specialist</td>
</tr>
<tr>
<td>Young males</td>
<td>More likely to be disengaged with any form of support (e.g. the GP), be</td>
</tr>
<tr>
<td>Risk Factor</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Homeless, unemployed, be in debt, take substances or misusing alcohol.</td>
<td></td>
</tr>
<tr>
<td>Old males</td>
<td>Associated with social isolation, loss events, poverty and debt, physical symptoms (or illness or disability), alcohol, depressive illness.</td>
</tr>
<tr>
<td>Previous episode of self-harm</td>
<td>Recurrence points to a need for a new or more consistent management plan to establish relationship and seek alternative means of responding to circumstances.</td>
</tr>
<tr>
<td>Previous or current psychiatric care</td>
<td>Recurrence points to a need for a new or more consistent management plan and points to need for psychiatric assessment and judgement about follow-up or immediate care.</td>
</tr>
<tr>
<td>Substance misuse</td>
<td>Risk of poor engagement with services and indicates a need for specialist services.</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Need for a longer term strategy to gain employment. Linked to social and financial difficulties.</td>
</tr>
<tr>
<td>Personality disorder, criminal record, violence (perpetrator or victim)</td>
<td>May need a long term strategy for treatment and help, in specialist services.</td>
</tr>
<tr>
<td>Hopelessness and poor problem-solving</td>
<td>Need assessment for further therapy (cognitively-oriented therapies).</td>
</tr>
</tbody>
</table>

### 8.6 Who should undertake assessments?

The 1984 DHSS guidelines acknowledged that assessment and aftercare planning could be undertaken by staff other than psychiatrists – social workers or psychiatric nurses for example – providing they had proper training and supervision. A number of studies have shown that the content and the quality of their assessments are comparable with those made by trainee psychiatrists (Newson-Smith & Hirsch, 1979; Catalan et al., 1980; Newson-Smith, 1980; Gardner et al., 1982). As a result, many self-harm assessment teams now include psychiatric social workers and nurses. Non-medical staff take longer over assessments than psychiatrists, and recommend psychiatric follow up more often (Newson-Smith, 1980).

One trial (Gardner et al., 1977) compared outcomes depending on whether an assessment and management decision was made by a psychiatrist or junior medical (non-psychiatric) staff; and found no difference in repetition rate; 38/140 (27%) repeated within the year after assessment by the general medical team, compared with 43/133 (32%) after psychiatric assessment. However, caution needs to be applied in generalising from this trial:-- it has not been replicated, junior medical staff received levels of training and supervision that are not available in many places, and neither all staff nor all eligible patients participated. Nevertheless, this does provide some
confirmation of the potential for training non-psychiatric staff to improve their skills in this area.

Observational studies suggest that when Emergency Department staff make assessments in routine clinical practice, the quality of note keeping is poor, and important information - such as assessment of mental state or continuing suicidal thinking - is frequently not recorded (Black & Creed, 1988; O’Dwyer et al., 1991; Merrill et al., 1992; Shepherd et al., 1995; Ebbage et al., 1994).

In practice, most assessments, especially those requested outside normal working hours, are undertaken by junior psychiatrists working on a rota, and standards of training and supervision are patchy (Taylor, 1998).

8.7 Clinical summary

Preliminary psychosocial assessment at triage may help to prevent the considerable numbers of people who self-harm leaving services before psychosocial assessment. Although systematic evidence is lacking, there is agreement that this should include, at minimum, assessment of: cognitive function and mental capacity, a person’s willingness to stay for further assessment, the person’s level of distress, and the possible presence of a mental illness.

Assessment of needs for psychosocial intervention is a necessary part of the treatment and care for people who have self-harmed. Assessment should be comprehensive and include evaluation of the social, psychological and motivational factors specific to each particular act of self-harm, as well as a full mental health assessment. Formal standardised measures, for most of the elements of a needs assessment, are not available.

Assessment of risk is also a necessary part of the care of people who have self-harmed. However, standardised risk assessment scales are only of use in detecting people of high/very high risk of repetition or suicide and have a low predictive power for the vast majority of people who have self-harmed, having either low sensitivity and high specificity, or higher sensitivity and lower specificity, each combined with and a low prevalence of the predicted outcome.

The alternative approach of integrating risk assessment into a needs assessment framework represents a possible solution to the problems identified, although this remains to be evaluated.

Social workers, psychiatric nurses and psychiatrists, if properly trained in the assessment and preliminary management of people who self-harm, are all able to undertake assessment, although there is insufficient evidence to determine if outcomes differ for each professional group. Nevertheless, the
training and supervision of junior psychiatrists to undertake this work appears to be variable and patchy.

Note-keeping by emergency department staff when assessing and treating people who self-harm appears to be poor, frequently not recording mental state assessment or continued suicidal thinking.

8.8 Clinical practice recommendations

Triage (Emergency Department staff, and professionals based in primary and community)

8.8.1.1 All people who have self-harmed should be offered a preliminary psychosocial assessment at triage (or at the initial assessment in primary or community settings) following an act of self-harm. Assessment should determine a person’s cognitive function and mental capacity, their willingness to remain for further (psychosocial) assessment, their level of distress and the possible presence of mental illness. (C)

For people waiting for physical treatments

8.8.1.2 People who have self-harmed should be provided with clear and understandable information about the care process, both verbally and as written material in a language they understand. (C)

For people who wish to leave before assessment and/or treatment

8.8.1.3 For people who have self-harmed and present to services and wish to leave before psychosocial assessment has been undertaken, assessment of capacity and the presence of mental illness should be undertaken before the person leaves the service. The assessment should be clearly recorded in his or her notes. (C)

8.8.1.4 People who have self-harmed and present to services and wish to leave before psychosocial assessment has been undertaken, and in whom diminished capacity and/or the presence of a mental illness is established, should be referred for urgent psychiatric assessment and appropriate measures taken to prevent such a person leaving the service. (C)

Assessment of need (specialist mental health professionals)

8.8.1.5 All people who have self-harmed should be offered an assessment of needs, which should be comprehensive and include evaluation of the social, psychological and motivational factors
specific to the act of self-harm, current intent and hopelessness, as well as a full mental health and social needs assessment. (C)

8.8.1.6 The comprehensive assessment of need should be written clearly in the service users notes. (C)

Assessment of risk

8.8.1.7 All people who have self-harmed should be assessed for risk, which should include identification of the main clinical and demographic features known to be associated with risk, and identification of the key psychological characteristics associated with risk, in particular depression, hopelessness and continuing suicidal intent. (C)

8.8.1.8 The assessment of risk should be written clearly in the service users notes. (GPP)

8.8.1.9 If a standardised risk assessment scale is used to assess risk, this should only be used to aid in the identification of those at high risk of repetition of self-harm or suicide. (C)

8.8.1.10 Standardised risk assessment scales should not be used as a means of identifying service users of supposedly low risk who are not then offered services. (C)

8.8.1.11 Consideration should be given to combining assessment of needs and risks as a single integrated psychosocial assessment process. (GPP)

Referral and discharge following self-harm

8.8.1.12 Referral for further assessment and treatment should be based upon the combined assessment of needs and risk. (C)

8.8.1.13 The decision to discharge a person without follow-up following an act of self-harm should be based upon the combined assessment of needs and risks. (C)

8.8.1.14 In particular, the decision to discharge a person without follow-up, following an act of self-harm, should not be solely based upon the presence of low risk and the absence of a mental illness, as many such people may have a range of other social and personal problems that may later increase risk, problems that may be amenable to therapeutic and/or social interventions. (GPP)
Training

8.8.1.15 All health professionals, including junior psychiatrists, social workers and psychiatric nurses, who undertake psychosocial assessments for people who have self-harmed should be properly trained and supervised to undertake assessment of needs and risks specifically for people who self-harm. (C)

8.8.1.16 Mental health services and emergency department services should jointly consider the development of regular training programmes in the psychosocial assessment and early management of self-harm, to be undertaken by all health professionals who may assess or treat people who have self-harmed (C)

Special issues for children

8.8.1.17 All children who have self-harmed should be assessed by healthcare practitioners experienced in the assessment of children and adolescents who self-harm. Assessment should follow the same principles as for adults who self-harm, but should also include a full assessment of the family and their social situation. [GPP]

8.8.1.18 Initial management should include advising carers of the need to remove all medications or other means of self-harm available to the young person who has self-harmed. [GPP]

8.8.1.19 All children who have self-harmed should normally be admitted overnight to a paediatric ward and assessed fully the following day before discharge or further treatment and care is initiated. [GPP]

Special issues for older people

8.8.1.20 All people over 65 years of age who have self-harmed should be assessed by healthcare practitioners experienced in the assessment of elderly people who self-harm. Assessment should follow the same principles as for adults who self-harm, but should also pay particular attention to the presence of depression, cognitive impairment and physical ill health, and should include a full assessment of their social and home situation. [GPP]

8.8.1.21 All acts of self-harm in people over the age of 65 years should be regarded as evidence of suicidal intent until proven otherwise as the numbers who go on to complete suicide is much higher than in younger adults. [GPP]
2.1 Research recommendations

8.8.1.22 We need multi-centre monitoring that takes account of cross-flow in and out of the catchment area, to assess local differences in self-harm presentations and to allow observational studies evaluating the impact of different styles of mental health service provision.

8.8.1.23 An appropriately designed study reporting all relevant outcomes should be undertaken to assess the impact of changes in local health policy upon the management of self-harm in different services, (for example, in emergency departments), including outcomes for service users.

8.8.1.24 An appropriately designed study should be undertaken to discover more about self-injury, particularly the similarities and differences compared to self-poisoning, such as whether repetition rates and fatal suicide attempts are different.

8.8.1.25 An appropriately designed study should be undertaken to assess the impact on services of involving service users in service planning and delivery, especially in emergency departments, focusing particularly on outcomes, including satisfaction and loss from the service, for people with repeated presentations.

8.8.1.26 An appropriately designed study, addressing all relevant outcomes including satisfaction with services and loss from services, repetition rates and suicide, to pilot and evaluate an integrated needs and risk assessment, as compared to both ‘standard assessment practice’ and to a separate assessment of needs and risk, should be considered.

9 Psychological, pharmacological and psychosocial interventions for the management of self-harm

9.1 Introduction

Each year up to 150,000 people attend an emergency department having self-harmed (Yeo, 1993). Between 0.5% and 1% of these people will die by suicide during the subsequent year (Hawton et al., 2003; Owens et al, 2002). This group accounts for about one-quarter of the 5000 people who kill themselves.
in England annually. Therefore it will come as no surprise that the Department of Health (2002) has identified the assessment and treatment of people who self-harm and attend an emergency department as a national priority for action in reducing the suicide rate. Moreover, there is a growing consensus that an act of self-harm is probably the most powerful single predictor of subsequent suicide (Royal College of Psychiatrists, 1994).

Suicide is a major cause of death in the young, and is the third most important cause of life years lost. Nevertheless, it is still a rare event with multiple causes. Also, the great majority of those who present to an emergency department having self-harmed will not go on to kill themselves. This makes it extremely difficult to identify those, from within the group who have self-harmed, who are at risk of killing themselves in the short- or medium-term. Moreover, to be able to demonstrate adequately the effectiveness of an intervention for people who have self-harmed, in terms of reducing the proportion of later suicides, an RCT would need a sample size of over 40,000 people divided between intervention and control groups (Gunnell & Frankel, 1994). None of the studies reviewed in this chapter had sufficient power to address suicide prevention as an outcome of mental health interventions for people who self-harm.

About one in six people who attend A&E following self-harm will self-harm again in the following year (Owens et al., 2002). For this reason, this chapter concentrates on evaluating the impact of different treatments on repetition of self-harm.

Self-harm is not an illness, but is a more or less dangerous behaviour that should alert us to an underlying problem, difficulty or disorder. People who self-harm are no more homogeneous as a group than people who have a cough. Coughs have numerous possible underlying causes including smoking, the common cold, tuberculosis and lung cancer. The same applies to self-harm. We know that gender, age, social and economic factors all influence the likelihood of a person self-harming, as do past personal history, mental ill-health and substance misuse. The picture is further complicated by the fact that self-harm has ‘reasons’ as well as ‘causes’. For some people, it can also be a ‘solution’ to underlying problems. Precisely why an individual self-harms at a particular point in their life will be unique, even in someone who self-harms frequently. It could be argued, therefore, that providing a treatment for ‘self-harm’ will be no more specific than offering a treatment for a ‘cough’. This creates a difficulty in reviewing treatments for self-harm.

With these cautions in mind, this chapter examines the level 1 evidence for interventions designed for people who have self-harmed. The treatments/interventions reviewed fall into three broad categories: psychological therapies, pharmacological therapies and psychosocial interventions, each with a somewhat different rationale for their use.
9.2 Current clinical practice

The provision of treatments for people who have self-harmed is highly variable. About 50% of people who have self-harmed and attend an emergency department do not wait for, or are not offered, a psychosocial assessment, and therefore receive no treatment for the problems that may have led an individual to self-harm (Kapur et al., 1998, Horrocks et al., 2003). Following psychosocial assessment, the treatment and services offered are again highly variable. Nevertheless, there is agreement that psychosocial assessment should lead to appropriate social, psychological or psychiatric help (Royal College of Psychiatrists, 1994).

Interventions offered to people who have self-harmed and reviewed for this guideline include:

- **Psychological interventions** - problem-oriented therapies (problem-solving therapy, cognitive behavioural therapy and psychodynamic interpersonal therapy); dialectical behaviour therapy; inpatient behavioural therapy and insight-oriented therapy; long- and short term therapy; home-based family therapy; and group therapy. The rationale for such interventions is that an estimated 70% of self-harm episodes are precipitated by a personal problem (Bancroft et al., 1977), and the wealth of data showing a strong association with past and present trauma. Psychological therapies are often aimed at improving social functioning, as well as reducing self-harming behaviour (e.g., Wood et al., 2001, McLeavey et al., 1994).

- **Pharmacological interventions** - antipsychotics and antidepressants. The use of pharmacological therapies for people with self-harm is derived from the link between mental ill-health and self-harm. Most people who attend an emergency departments after self-harm meet the criteria for a mental disorder, and the majority could be diagnosed as being depressed (Haw et al., 2001). However, service users in this study were interviewed in the emergency department at a time when they are likely to show symptoms that only days later may have subsided. Some studies have also postulated a link between self-harm and the neurochemical changes purportedly associated ordinarily with depression, such as reduced central serotonergic function in people with suicidal behaviour (e.g., Roy & Linnoila, 1990).

- **Social and service-level interventions** - intensive intervention plus outreach; emergency card; continuity of therapist and a suicide prevention centre; a letter from the GP; nurse-led case management; admission to hospital or discharge to GP; specialised services and general services. Much of the focus of such interventions is to improve contact and engagement with services following treatment for an index episode. This is important because adherence to outpatient treatment...
programmes after an episode of self-harm is generally poor at around 40% (van Heeringen, 1992).

9.3 Studies included


Additional systematic searches were undertaken to update the review. Ten additional studies were found (BATTAGLIA1999, BENNEWITH2002, CEDEREKE2002, CLARKE2002, EVANS1999a, GUTHRIE2001, SANDMAN1993, SANDMAN2000, WILHELM2000, WOOD2001), three of which did not meet the inclusion criteria set by the GDG (SANDMAN1993, SANDMAN2000, WILHELM2000). An additional unpublished study was sourced by contacting researchers known to be working in this area (TYRER26). Thus, thirty-two studies were included, providing data on up to 9,863 participants.

Four studies were undertaken in the US, two in each of Belgium and Germany, and one in each of Canada, the Netherlands and Sweden. The remainder were carried out in the UK. Studies were carried out between 1977 and 2003, and ranged in length from 2 to 24 months. Three studies looked at services for teenagers (COTGROVE1995, HARRINGTON1998, WOOD2001).


Full details of the search strategy for this and other reviews in the guideline are in Appendix 7.

26 This study has been published since this review was undertaken (see Appendix 18).

### 9.4 Comparisons made

The interventions for which studies are available are considered under three headings: psychological interventions, pharmacological interventions, and psychosocial and other interventions. The interventions in some studies were hard to categorise; therefore, for this review, the categories into which studies in the original review had been grouped were maintained. Two additional comparisons were made to widen the focus of the review: ‘specialised services’ are compared with ‘generalised services’, and all psychological therapies compared with standard aftercare.

**Outcomes**

- Repetition of self-harm (including fatal and non-fatal suicide)
- Death by suicide
- Leaving the study early for any reason
- Number hospitalised
- Hopelessness scale score
- Rate of self-harm behaviour
- Score on suicide ideation scale
- Readmission rate
- HoNOSCA score
9.5 Psychological interventions

The following trials vary considerably in the populations included in the trial, and inevitably, comparisons with ‘standard care’ are compounded by the variation in what amounts to ‘standard care’. In any case, studies were usually small and few have attempted to replicate another study, with the result that in most cases there was insufficient evidence to make any positive or negative recommendations.

9.5.1 Problem-oriented therapy versus standard aftercare


Effect of treatment on repetition

There is insufficient evidence to determine whether there is a clinically significant difference between problem-oriented therapy and standard aftercare on reducing the likelihood of repetition of self-harm (N = 527; n = 1014; RR = 0.87; 95% C.I., 0.73 to 1.03)\(^{28}\).

There is insufficient evidence to determine whether there is a clinically significant difference between problem-oriented therapy and standard aftercare on reducing the likelihood of repetition of self-harm 12 months after treatment (N = 1; n = 480; RR = 0.91; 95% C.I., 0.77 to 1.07).

Effect of treatment on death by suicide

There is insufficient evidence to determine if there is a clinically significant difference between problem-oriented therapy and standard aftercare on reducing the likelihood of death by suicide in people who self-harm (N = 1; n = 480; RR = 0.4; 95% C.I., 0.08 to 2.06).

Acceptability of treatment

There is insufficient evidence to determine if there is a clinically significant difference between problem-oriented therapy and standard aftercare on reducing the likelihood of leaving treatment early (N = 2; n = 514; RR = 0.98; 95% C.I., 0.66 to 1.46).

\(^{27}\) Data from two trials (GUTHRIE2001 HAWTON1987) could not be extracted on an intention-to-treat basis so these are omitted from this comparison

\(^{28}\) Forest plots are available in Appendix 19.
9.5.2 Dialectical behaviour therapy versus standard aftercare

Only one study made this comparison (LINEHAN1991). Participants in the experimental group were required to stop any other psychotherapeutic intervention they were undergoing for the duration of the study period. Since this was not a requirement for participants in the control group, nine (out of 25) received some kind of additional intervention during the study. All participants had a diagnosis of borderline personality disorder thus limiting the applicability of these findings. The outcome ‘repetition’ included only self-harm with suicidal intent.

**Effect of treatment on repetition**

There is limited evidence suggesting that there is a clinically significant difference favouring dialectical behaviour therapy over ‘standard aftercare’ on reducing the likelihood of repetition of self-harm with suicidal intent in people with borderline personality disorder (N = 1; n = 63; RR = 0.81; 95% C.I., 0.66 to 0.98).

**Acceptability of treatment**

There is insufficient evidence to determine if there is a clinically significant difference between dialectical behaviour therapy and ‘standard aftercare’ on reducing the likelihood of leaving treatment early in people with borderline personality disorder (N = 1; n = 63; RR = 1.08; 95% C.I., 0.51 to 2.29).

9.5.3 Inpatient behaviour therapy versus insight-oriented therapy

One study made this comparison (LIBERMAN1981). Here behaviour therapy covered social skills training, anxiety management and family work, and insight-oriented therapy involved individual therapy, group therapy, psychodrama and family therapy. Both groups received around 32 hours of therapy over 10 days.

**Effect of treatment on repetition**

There is insufficient evidence to determine if there is a clinically significant difference between inpatient behaviour therapy and insight-oriented therapy on reducing the likelihood of repetition of self-harm (N = 1; n = 24; RR = 0.67; 95% C.I., 0.13 to 3.3).

9.5.4 Long-term therapy versus short-term therapy

Only one study made this comparison (TORHORST1988). It compared outcomes following twelve monthly therapy sessions with 12 weekly sessions. The type of therapy offered was not specified. Outcomes are at end of treatment for each group.

**Effect of treatment on repetition**
There is insufficient evidence to determine if there is a clinically significant difference between long-term therapy and short-term therapy on reducing the likelihood of repetition of self-harm (N = 1; n = 80; RR = 1; 95% C.I., 0.44 to 2.26).

9.5.5 Homebased family therapy versus standard aftercare

One study compared home based family therapy undertaken by two social work master’s level students with ‘standard aftercare’ involving no home visits. The experimental intervention involved a single home-based assessment and four treatment sessions at home (HARRINGTON1998). All participants were under 16 years old, none of whom were seriously suicidal; nearly 90% were female; and over 60% were reported as major depression. All were routine referrals to mental health services.

Effect of treatment on repetition

There is insufficient evidence to determine if there is a clinically significant difference between home based family therapy and standard aftercare on reducing the likelihood of repetition of self-harm (N = 1; n = 149; RR = 1.01; 95% C.I., 0.47 to 2.19).

Effect of treatment on other efficacy outcomes

There is evidence suggesting that there is no clinically significant difference between home based family therapy and standard aftercare on reducing hopelessness in people who self-harm as measured by the Hopelessness scale (N = 1; n = 154; WMD = 0.3; 95% C.I., -0.98 to 1.58)

There is insufficient evidence to determine if there is a clinically significant difference between home based family therapy and standard aftercare on reducing suicidal ideation in people who self-harm as measured by the Suicidal Ideation scale (N = 1; n = 154; WMD = -3.4; 95% C.I., -19.18 to 12.38)

There is insufficient evidence to determine if there is a clinically significant difference between home based family therapy and standard aftercare on reducing suicidal ideation at 4-month follow-up in people who self-harm as measured by the Suicidal Ideation Scale (N = 1; n = 149; WMD = -5.1; 95% C.I., -17.37 to 7.17).

9.5.6 Group therapy versus standard aftercare

One study (WOOD2001) evaluated the impact of developmental group therapy for teenagers (mean age 14 years). Participants were allocated to: either group therapy for a minimum of 6 sessions, after which they were free to choose how much longer they remained in the group; or to standard care, which included interventions from community psychiatric nurses and
psychologists, including family sessions, counselling, and psychotropic medication.

**Effect of treatment on repetition**
There is strong evidence suggesting that there is a clinically significant difference favouring group therapy over standard aftercare on reducing the likelihood of repetition of self-harm in adolescents (N = 1; n = 63; RR = 0.19; 95% C.I., 0.05 to 0.81)

**Effect of treatment on other efficacy outcomes**
There is insufficient evidence to determine if there is a clinically significant difference between group therapy and standard aftercare on reducing suicide ideation in adolescents who self-harm as measured by the Suicide Ideation scale (N = 1; n = 54; WMD = -4.7; 95% C.I., -28.54 to 19.14).

There is insufficient evidence to determine whether there is a clinically significant difference between group therapy and standard aftercare on improving global outcome in adolescents who self-harm as measured by the Health of the Nation Outcome Scales for Children and Adolescents (N = 1; n = 62; WMD = -2.1; 95% C.I., -5.96 to 1.76).

9.5.7 Psychological therapies versus standard aftercare

**Effect of treatment on repetition**
There is insufficient evidence to determine if there is a clinically significant difference between psychological therapies and standard aftercare on reducing the likelihood of repetition of self-harm (N = 5; n = 1014; RR = 0.88; 95% C.I., 0.74 to 1.05).

**Acceptability of treatment**
There is insufficient evidence to determine if there is a clinically significant difference between psychological therapies and standard aftercare on reducing the likelihood of leaving treatment early (N = 3; n = 177; Random effects: RR = 1.30; 95% C.I., 0.5 to 3.37).

9.6 Pharmacological interventions
For this guideline, only antipsychotic and antidepressant medication trials were reviewed. Clearly, the use of antipsychotic medication is not for the
treatment of psychotic phenomena; rather, their general capacity to reduce arousal and to calm a person, are the more likely mechanisms of action. No data were available regarding side effects, thus limiting conclusions, especially given the usually high incidence of side effects with antipsychotic medication (NCCMH, 2002).

9.6.1 Antipsychotic medication versus placebo or low dose antipsychotic medication

Two studies compared moderate dose antipsychotic medication with either placebo or a very small dose of the same drug (MONTGOMERY1979, BATTAGLIA1999). In MONTGOMERY1979 flupenthixol depot (20 mg) or placebo, administered every four weeks for six months. All participants were classed as people who self-harm repeatedly. In BATTAGLIA1999 12.5 mg fluphenazine or 1.5 mg fluphenazine was administered once a month for six months.

Effect of treatment on repetition

There is limited evidence suggesting that there is a clinically significant difference favouring flupenthixol over placebo on reducing the likelihood of repetition of self-harm (N = 1; n = 30; RR = 0.29; 95% C.I., 0.1 to 0.81).

There is insufficient evidence to determine if there is a clinically significant difference between 12.5 mg fluphenazine and 1.5 mg fluphenazine on reducing the likelihood of leaving treatment early (N = 1; n = 58; RR = 1.12; 95% C.I., 0.71 to 1.76).

There is insufficient evidence to determine whether there is a clinically significant difference between 12.5 mg fluphenazine and 1.5 mg fluphenazine on reducing the average number of repetitions of self-harm per month (N = 1; n = 53; SMD = -0.06; 95% C.I., -0.6 to 0.48).

9.6.2 Antidepressants versus placebo

Three studies made this comparison (HIRSCH1982, MONTGOMERY1983, VERKES1998). In HIRSCH1982 the antidepressants given were either 30 mg to 60mg mianserin or 75 mg to 150 mg nomifensine29. Participants took either for six weeks. In MONTGOMERY1983 participants took 30mg mianserin for six months, and in VERKES1998 participants took 40mg paroxetine for twelve months. In this latter study both study groups received psychotherapy.

Effect of treatment on repetition

There is insufficient evidence to determine if there is a clinically significant difference between antidepressants and placebo or an ultra-low dose of

29 Not available in the UK
antidepressant on reducing the likelihood of repetition of self-harm (N = 3; n = 243; RR = 0.89; 95% C.I., 0.61 to 1.29).

**Effect of treatment on death by suicide**
There is insufficient evidence to determine if there is a clinically significant difference between antidepressants and placebo or an ultra-low dose of antidepressant on reducing the likelihood of death by suicide in people who self-harm (N = 1; n = 91; RR = 0.33; 95% C.I., 0.01 to 7.8).

**Acceptability of treatment**
There is insufficient evidence to determine if there is a clinically significant difference between antidepressants and placebo or an ultra-low dose of antidepressant on reducing the likelihood of leaving treatment early (N =1; n = 91; RR = 0.93; 95% C.I., 0.75 to 1.14).

### 9.7 Psychosocial and other interventions

#### 9.7.1 Intensive intervention plus outreach versus standard aftercare
Six studies were included in this comparison (ALLARD1992, CEDEREKE2002, HAWTON1981, VAN DER SANDE1997, VANHEERINGEN1995, WELU1977). In an ‘intensive intervention’ participants in the experimental group have greater access to therapists than those in standard care. Additionally, efforts were made to maintain contact with participants throughout the study period, for example, to follow up following a missed appointment. Study length ranged from three to twelve months. The participants varied between studies in terms of source of participant and diagnoses, although some studies did not give a psychiatric diagnosis.

**Effect of treatment on repetition**
There is evidence suggesting that there is no clinically significant difference between intensive intervention plus outreach and standard aftercare on reducing the likelihood of repetition of self-harm (N = 6; n = 1395; RR = 0.97; 95% C.I., 0.83 to 1.14).

**Effect of treatment on death by suicide**
There is insufficient evidence to determine if there is a clinically significant difference between intensive intervention plus outreach and standard aftercare on reducing the likelihood of death by suicide in people who self-harm (N = 4; n = 1031; RR = 0.99; 95% C.I., 0.43 to 2.25).

**Effect of treatment on other outcomes**
There is limited evidence suggesting that there is a clinically significant difference favouring intensive intervention plus outreach over standard aftercare on reducing the likelihood of people who self-harm being hospitalized 12 months after treatment (N = 1; n = 249; RR = 0.63; 95% C.I., 0.43 to 0.93).

There is evidence suggesting that there is a statistically significant difference favouring intensive intervention plus outreach over standard aftercare on reducing hopelessness in people who self-harm, as measured by the Hopelessness Scale at 12-months follow-up, but the size of this is unlikely to be of clinical significance (N = 1; n = 274; WMD = -1.4; 95% C.I., -2.7 to -0.1).

**Acceptability of treatment**
There is evidence suggesting that there is no clinically significant difference between intensive intervention plus outreach and standard aftercare on reducing the likelihood of leaving treatment early (N = 6; n = 1395; Random effects: RR = 0.93; 95% C.I., 0.72 to 1.21)

## 9.7.2  Emergency card versus standard aftercare
Three studies were included in this comparison (COTGROVE1995, EVANS1999A, MORGAN1993). Patients in the experimental group, in addition to being offered standard aftercare, were given an emergency contact card which gave them either 24-hour access to emergency advice from a psychiatrist (EVANS1999A, MORGAN1993) or allowed them to admit themselves to hospital (COTGROVE1995). The studies lasted between six months and a year. COTGROVE1995 studied adolescents.

**Effect of treatment on repetition**
There is evidence suggesting that there is no clinically significant difference between using an emergency card and standard aftercare on reducing the likelihood of repetition of self-harm (N = 3; n = 1144; Random effects: RR = 0.79; 95% C.I., 0.39 to 1.57).

**Effect of treatment on death by suicide**
There is insufficient evidence to determine if there is a clinically significant difference between using an emergency card and standard aftercare on reducing the likelihood of death by suicide at the end of the intervention period (6-12 months) in people who self-harm (N = 1; n = 1039; RR = 1.97; 95% C.I., 0.18 to 21.6).

## 9.7.3  Same therapist versus different therapist
One study made this comparison (TORHORST1987). All participants received a motivational interview, letter and assessment of motivation towards therapy. This was designed to increase adherence with treatment. Participants
in the experimental group then received therapeutic contact with the original hospital therapist in an outpatient setting, whereas participants in the control group received therapy in a specialised suicide prevention centre with a different therapist. This makes it hard to assess the effect of treatment.

Effect of treatment on repetition
There is limited evidence suggesting that there is a clinically significant difference favouring different therapist over same therapist on reducing the likelihood of repetition of self-harm \((N = 1; n = 141; \text{RR} = 3.22; 95\%\ C.I., 1.09\ \text{to}\ 9.51)\).

There is insufficient evidence to determine if there is a clinically significant difference between receiving a different therapist and receiving a same therapist on reducing the likelihood of repetition of self-harm 9 months after treatment \((N = 1; n = 136; \text{RR} = 3.18; 95\%\ C.I., 0.9\ \text{to}\ 11.25)\).

Effect of treatment on attendance at therapy sessions
There is some evidence suggesting that there is a clinically significant difference favouring same therapist over different therapist on increasing the likelihood of attending at least one therapy session after an episode of self-harm treated in hospital \((N = 1; n = 141; \text{RR} = 0.58; C.I., 0.38\ \text{to}\ 0.89)\).

Effect of treatment on death by suicide
There is insufficient evidence to determine if there is a clinically significant difference between receiving a different therapist and receiving a same therapist on reducing the likelihood of death by suicide 9 months after treatment \((N = 1; n = 127; \text{RR} = 1.68; 95\%\ C.I., 0.29\ \text{to}\ 9.69)\).

9.7.4 General hospital admission versus discharge
One study made this comparison (WATERHOUSE1990). In this study no additional treatment was offered to either group, although all patients were advised to contact their GP on discharge. Average length of admission was 17 hours.

Effect of treatment on repetition
There is insufficient evidence to determine if there is a clinically significant difference between general hospital admission and discharge on reducing the likelihood of repetition \((N = 1; n = 77; \text{RR} = 0.77; 95\%\ C.I., 0.18\ \text{to}\ 3.21)\).

9.7.5 GP letter versus standard aftercare
One study made this comparison (BENNEWITH2002). In this study, which was cluster-randomised by GP practice, patients were sent a letter by GPs
from practices allocated to the experimental group inviting them to make an appointment for a consultation.

**Effect of treatment on repetition**
There is insufficient evidence to determine whether there is a clinically significant difference between using a GP letter and standard aftercare on reducing the likelihood of repetition of self-harm \((N = 1; n = 1932; RR = 1.12; 95\% \text{ C.I.}, 0.94 \text{ to } 1.34)\).

9.7.6 **Nurse-led case management versus standard aftercare**
One study made this comparison (CLARKE2002). The intervention involved case management combined with routine management, including medical and psychiatric assessment.

**Effect of treatment on readmission**
There is insufficient evidence to determine if there is a clinically significant difference between nurse-led case management and standard aftercare on reducing the likelihood of people who self-harm being readmitted to hospital \((N = 1; n = 467; RR = 0.85; 95\% \text{ C.I.}, 0.48 \text{ to } 1.51)\).

9.7.7 **Specialised services versus generalised services**

**Effect of treatment on repetition**
There is evidence suggesting that there is no clinical significance between specialised services and generalised services on reducing the likelihood of repetition of self-harm \((N = 10; n = 2881; RR = 0.97; 95\% \text{ C.I.}, 0.85 \text{ to } 1.11)\).

9.8 **Clinical summary**
The overriding conclusion from this review is that the evidence-base for the treatments of self-harm is extremely limited. Most studies are small and tend to recruit fairly specific groups, making generalisation problematic. This is true for most of the studies upon which recommendations are made. Moreover, as a group, people who self-harm are highly heterogeneous, and what works for one subgroup may be useless for another. With this important caveat in mind, the evidence, such as it is, can be summarised as follows.
There is limited evidence that an intensive intervention plus outreach compared with standard aftercare reduces hospitalization 12 months after treatment, and reduces hopelessness; that dialectical behaviour therapy compared with standard aftercare reduces repetition in people with borderline personality disorder, although numbers were small and this only applies to people who repeatedly self-harm; and that depot flupenthixol compared with placebo reduces repetition rates in people who self-harm repeatedly; although the absence of data on side effects is an important omission.

There is also some evidence that attending a specialized suicide prevention centre and seeing a new therapist is more likely to reduce repetition than seeing the same therapist from an inpatient admission for outpatient therapy. However, seeing the same therapist increases the likelihood of attending therapy in the first place. It is difficult to draw firm conclusions from the one study that made this comparison (TORHORST 1987).

For adolescents there is strong evidence suggesting that there is a clinically significant difference favouring group therapy over standard aftercare on reducing the likelihood of repetition, although the numbers were small. For other therapies and outcomes there is insufficient evidence of effectiveness.

The evidence reviewed here suggests that there are surprisingly few specific interventions for people who have self-harmed that have any positive effect. The GDG came to the conclusion that, at the present time, there was insufficient evidence to support any recommendation for interventions specifically designed for people who self-harm. While there may be some evidence for the treatment of subgroups, such as those diagnosed with borderline personality disorder, the studies were too small to make recommendations. However, the positive outcome for adolescents who have repeatedly self-harmed receiving group therapy is encouraging, although because of the rather selective group this was applied to this approach is in need of further investigation.

Moreover, the GDG came to the conclusion that referral for further treatment after an act of self-harm should be determined by the overall needs of the service user, rather than by the fact that they have self-harmed per se. This draws attention to the reliance on repetition as the primary outcome measure in many studies whereas outcomes relevant to service users such as depression status or quality of life may be more relevant.

### 9.9 Clinical practice recommendations

**9.9.1** Following psychosocial assessment for people who have self-harmed, the decision about referral for further treatment and help should be based upon a comprehensive psychiatric, psychological and
social assessment, including an assessment of risk, and should not be determined on the basis of having self-harmed. [C]

9.9.2 If conditions are identified that can be treated with psychotherapeutic, pharmacological or other interventions, service users who have self-harmed should be referred, following full consultation between the user, carers (where appropriate) and referring clinician(s), to appropriate services. [C]

9.9.3 The professional making the assessment should inform both mental health services and the service user’s GP, in writing, of the treatment plan if treatment is offered to a person who has self-harmed who is already in contact with mental health services. [GPP]

9.9.4 For people who have self-harmed and deemed to be at risk of repetition, consideration may be given to offering an intensive intervention combined with outreach. The intensive intervention should give greater access to a therapist than good standard care, and outreach should include following up the service user when an appointment has been missed. The intervention plus outreach should continue for at least 3 months. [C]

9.9.5 For people who self-harm with a diagnosis of borderline personality disorder, consideration may be given to the use of dialectical behaviour therapy. However, this should not preclude other psychological treatments with evidence for effectiveness for people with this diagnosis, but not reviewed for this guideline. [C]

9.9.6 For adolescents who have self-harmed several times, consideration should be given to offering group therapy with other adolescents who have repeatedly self-harmed. This should include at least six sessions. Extending the group therapy may also be offered, the precise length of which should be decided jointly by the clinician and the service user. [B]

9.10 Research recommendations

9.10.1 Further research into treatments specific to people who self-harm should evaluate the differential responses of different patient subgroups, using a broad range of outcomes, especially those relevant to service users such as quality of life.
9.10.2 Research designed to determine the best methods for keeping people who self-harm in contact with services, including evaluating the longer-term consequences of being lost from services.

9.10.3 An adequately powered RCT reporting all relevant outcomes should be undertaken to determine the relative effectiveness of group therapy for adolescents who self-harm. The study should address patient characteristics (such as gender, diagnosis, frequency and method of self-harm, past history of abuse) and family characteristics (such as parental disharmony and divorce, family size, socio-economic status, mental health problems in the parents and sibs). Outcomes should include loss from services, admission rates, satisfaction, repetition of self-harm, quality of life, educational attainment and employment status.

9.10.4 An adequately powered RCT reporting all relevant outcomes should be undertaken to determine the relative effectiveness of intensive intervention combined with assertive outreach for people who self-harm. The study should address patient characteristics (such as age, gender, diagnosis, frequency and method of self-harm, past history of abuse) and therapists characteristics (such as age, gender, training, professional discipline, parental status). Outcomes should include loss from services, admission rates, satisfaction, repetition of self-harm, quality of life, and employment status.
10 References


B. v. Croydon Health Authority [1995] 1 All E.R. 683


BAEM (Unpublished) Survey of self poisoning in accident and emergency departments in the UK (carried out in 2003)


Re MB [1997] EWCA Civ 1361 (26th March 1997)


Treatment of drug overdose with naloxone, a specific narcotic antagonist. *Lancet, 1*, 452.


Appendices 1-18
Available as a separate file for this consultation.

Appendix 19: Forest plots
Available as a separate file for this consultation.