Interventions for post-stroke disturbances of mood and emotional behaviour: recommendations from SIGN 118

David Gillespie
Sara Joice
Maggie Lawrence, Glasgow Caledonian University
Janice Whittick

Available at: https://works.bepress.com/maggie_lawrence/7/
Interventions for post-stroke disturbances of mood and emotional behaviour: recommendations from SIGN 118

Background: Stroke is a leading cause of death and disability. A high proportion of those who survive participate in programmes of rehabilitation. Clinical practice guidelines have come to play an increasingly important role in stroke rehabilitation, providing accessible summaries of the evidence for the management of specific consequences of the condition. Among the most common – and disabling – consequences of stroke are disorders of mood and emotional behaviour.

Content: This article reports the development of clinical practice recommendations for post-stroke emotional disturbance for the Scottish Intercollegiate Guidelines Network (SIGN). SIGN 118 Management of Patients with Stroke: Rehabilitation, Prevention and Management of Complications and Discharge Planning was published in June 2010. Suggestions are made for ways in which the SIGN 118 recommendations for disorders of mood and emotional behaviour can be implemented in routine clinical practice. Limitations of the guidelines are also discussed.

Conclusions: Although gaps in the evidence base exist, SIGN guideline 118 has an important role to play in closing the gap between what stroke multi-disciplinary teams do to promote good psychological outcomes, and which aspects of practice are supported by a robust evidence base.

Key words: clinical guidelines, emotional adjustment, evidence-based practice, post-stroke depression, stroke rehabilitation

Submitted 24 June 2010, sent back for revisions 4 August 2010; accepted for publication following double-blind peer review 5 October 2010

Stroke is the third leading cause of death in the Western world and the main cause of complex disability (Adamson et al, 2002). Approximately eighty percent of survivors benefit from rehabilitation (Young and Foster, 2007); clinical practice guidelines aim to improve the effectiveness of the rehabilitation patients receive.

Clinical guidelines have been defined as ‘systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances’ (Field and Lohr, 1990, p38). They are an important feature of evidence-based practice, helping health care professionals – as well as patients and carers – to make sense of the large, ever accumulating volume of evidence and opinion relating to therapy and rehabilitation.

Clinical guidelines can improve quality of care and, ultimately, patient outcomes, as demonstrated by several studies (see Grimshaw and Russell, 1993). However, there is evidence that the implementation of guidelines into routine practice can be problematic. A recent report (Davies et al, 2007) found that although managers supported greater systematisation of practice, health care professionals often expressed ambivalence towards clinical guidelines, perceiving them to be lengthy, complex documents that lead to ‘cook book practice’. Moreover, practitioners had limited understanding of the methods underlying guideline development, and were uncertain of the links between final recommendations and supporting evidence.

In this article, the authors aim to address reservations held by some health care professionals towards guidelines. The authors consider the recently published Scottish Intercollegiate Guidelines Network (SIGN) clinical guidelines, SIGN 118 Management of Patients with Stroke: Rehabilitation, Prevention and Management of Complications, and Discharge Planning (Scottish Intercollegiate Guidelines Network, 2010). The authors were members of the SIGN 118 guideline development group whose specific role was to consider the evidence for the

David C Gillespie, Sara Joice, Maggie Lawrence, Janice Whittick

David C Gillespie is Consultant Clinical Neuropsychologist, Department of Clinical Psychology, Astley Ainslie Hospital, Edinburgh; Sara Joice is Health Psychologist, Social Dimensions of Nursing and Midwifery, University of Dundee, Dundee; Maggie Lawrence is Deputy Director, Centre for Evidence Based Care of Older People, Glasgow Caledonian University, Glasgow; and Janice Whittick is Consultant Clinical Psychologist, Department of Clinical Psychology, Stratheden Hospital, Cupar, Scotland

Correspondence to: David C Gillespie. E-mail: david.gillespie@nhslothian.scot.nhs.uk
effectiveness and feasibility of interventions for disturbances of mood and emotional behaviour. This article:

- Outlines the process of SIGN guideline development to show clinicians how evidence was critically appraised and synthesised, and makes transparent the links between levels of evidence and grades of recommendation
- Reports the recommendations
- Suggests how the stroke multidisciplinary team (MDT) – particularly those without specialist psychological qualifications – can implement the recommendations into clinical practice.

Additional information about the guidance, including a list of useful web-based resources, has been published (Smith et al, 2010).

---

**THE PROCESS OF SIGN 118 GUIDELINE DEVELOPMENT**

**The background to SIGN**

SIGN was established in 1993 to develop evidence-based clinical practice guidelines for the National Health Service in Scotland. Topics are selected on the basis of burden of disease, the existence of variation in clinical practice, and the potential to improve outcome. Stroke is a clinical priority area for NHS Scotland and meets these requirements. The previous SIGN stroke rehabilitation guideline (SIGN 64) was published in 2002. In 2009, to reflect the burgeoning of new evidence, a selective update was commissioned.

**SIGN guideline methodology**

SIGN uses an established and transparent methodology for developing clinical guidelines (available at www.sign.ac.uk/pdf/sign50.pdf).

The first step involved a review of the patient literature to identify any new issues or evidence that had emerged since the previous guideline. A Patient Involvement Officer presented the results of this initial literature search to the guideline development group, who used the information to refine key questions (KQs) to shape the selective update. The guideline development group comprised a range of clinical disciplines, selected to ensure balanced geographical representation, so that consideration could be given to clinical practice in both urban and rural settings. Moreover, the guideline development group included patient representatives, ensuring that the KQs were informed by issues that matter to patients, including outcomes that are valuable to them. KQs (n = 21) covered various stroke rehabilitation issues, and were assigned to small working groups (KQ groups) which comprised individuals with relevant clinical expertise and lay representatives with a particular interest in an area.

All SIGN guidelines are based on a well-structured systematic review of the evidence, using a range of sources to minimize bias and ensure adequate coverage of the relevant literature. A SIGN Information Officer conducted systematic literature searches for each SIGN 118 KQ. The following electronic bibliographic databases were searched for studies published between 1996 and 2009, the period covered by the guideline update: Cochrane Register of Controlled Trials (CENTRAL), Cochrane Database of Systematic Reviews, MEDLINE, EMBASE, CINAHL, PsycINFO, and the NHS Economic Evaluation Database. More information about the search strategy process for SIGN 118, including the keywords used for each KQ, is published on the SIGN website (accessed at www.sign.ac.uk/pdf/sign118strategy.pdf).

Search results were screened for methodological and topic relevance, and distributed to the KQ groups. The citations (title and abstract, where available) were further screened for potential sources of clinically relevant evidence, which were requested as full text copies. Papers were examined by two authors (to minimize reviewer bias) and subjected to methodological assessment using standardized SIGN data extraction forms (available for inspection on the SIGN website). Methodological assessment focused on those aspects of study design which research has shown to influence the validity of reported results and conclusions (e.g. whether a study addressed a clearly focused question; whether outcomes were measured in a valid, reliable way).

Each KQ group then met to reach a consensus about which papers were methodologically rigorous enough to be included as evidence to address the KQs. Any ambiguity was resolved through discussion. Recommendations were then developed from the extracted information using SIGN’s two-stage process: evidence synthesis and considered judgement (see Harbour and Miller, 2001 for an overview):

- Stage 1. Evidence synthesis involves appraising the consistency of the body of evidence, and its relevance to clinical practice. The aim is to distinguish strong, consistent evidence from weaker, less consistent evidence. SIGN confers levels of evidence that range from 1++ (high quality meta-analyses, systematic reviews of randomized controlled trials (RCTs)) to 4 (expert opinion).
The key questions for mood and emotional behaviour

The review of the patient literature carried out by the Patient Involvement Officer had revealed that problems with mood and emotions were areas of particular concern to patients and relatives in the post-acute period of stroke recovery (e.g. Aybek et al, 2005; Wilz, 2007). Consequently, and because the initial literature review did not reveal any clear consensus about how to manage or treat these common conditions, four mood and emotion KQs were agreed (Table 1). Issues relating to patient screening and specialist referral were considered also.

The emotional impact of stroke

Mood disturbance is common following stroke, with as many as one in three experiencing clinical levels of depression at some point in their recovery (Hackett et al, 2005). Post-stroke depression has been associated with poor rehabilitation outcomes (van de Weg et al, 1999), poor social outcome (Hommel et al, 2009) and even increased mortality (House et al, 2001). Diagnosis is complicated, however, by the overlap between symptoms of depression and the direct (non-mood related) effects of stroke, e.g. motor slowness and concentration problems; it is particularly difficult to assess mood in people with language problems (Sutcliffe and Lincoln, 1998). Consequently, many individuals do not have their depression recognised (Salter et al, 2007). There have been calls for all members of MDTs – not just those with mental health backgrounds – to actively contribute to the detection of depression (Pfeil et al, 2009).

Emotional lability is a disorder of emotional behaviour in which there is a loss of control over emotions, such that sufferers are more likely to cry, or, less commonly, laugh, and have difficulty stopping an emotional display once triggered. The condition, which affects approximately 25% of survivors at six months, and 10–15% at one year post-stroke, can be acutely embarrassing and interfere with self-confidence (House et al, 2004).

Self-esteem, body image and self-confidence difficulties – these fall under the umbrella term ‘emotional adjustment’ – have been noted in several studies of stroke survivors (e.g. Chang and Mackenzie, 1998; Vickery et al, 2008; Jones et al, 2009). Vickery et al found that individuals with stroke had significantly lower self-esteem than matched controls, and that self-esteem was associated with depressed mood. Individuals’ difficulties in these areas have been described somewhat loosely in the literature, but encompass feelings of low self-worth, embarrassment and shame, as well as negative beliefs about recovery and lack of perceived control.

THE RECOMMENDATIONS AND SUGGESTIONS FOR IMPLEMENTATION

This article outlines (and see Table 2) the mood and emotional behaviour recommendations from the SIGN guideline 118. For each recommendation the authors identify the evidence on which it was based, and make suggestions for implementation in practice.

| Table 1. SIGN 118 key questions (KQs) for disorders of mood and emotional behaviour |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
Screening and assessment

The need for routine screening is clear: mood disturbance is common, and stroke survivors will not necessarily volunteer information about their mood unless asked specifically. Studies have shown poor compliance with post-stroke mood screening (Bowen et al, 2005), and there is evidence that many clinicians initiate mood screening only when they notice very obvious depressive symptoms (Hart and Morris, 2008). In other words, individuals who are ‘inwardly’ (if not outwardly) distressed are likely to be overlooked.

As shown in Table 2, specific screening questionnaires are suggested because published evidence of reliability and validity in stroke populations exists for both the Stroke Aphasia Depression Questionnaire (SAD-Q; Bennett et al, 2006) and the General Health Questionnaire (GHQ; Johnson et al, 1995). Mood screening measures should be repeated even for individuals who score within the normal range, because studies have shown that new onset depression can develop any time after stroke onset (Wilz and Barskova, 2007). There appear, however,

<table>
<thead>
<tr>
<th>Table 2. SIGN 118 clinical practice recommendations for disorders of mood and emotional behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screening and assessment</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Patient referral</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Emotional Lability</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Preventing post stroke depression</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Treating post-stroke depression</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Post-stroke emotional adjustment</strong></td>
</tr>
</tbody>
</table>

Note: Recommendations graded A to D, where A = strongest evidence; □ indicates good practice point recommended by guideline development group, but not supported by evidence.
to be no published data relating to the optimum time intervals between repeated screenings.

Stroke services should consider establishing mood screening protocols, which clearly indicate who will carry them out (see Lightbody et al (2007) for nurse-led, and Kneebone et al (2010) for occupational therapist-led approaches to post-stroke mood screening). Staff training may be necessary as it has been found that lack of confidence administering screening tools, and the feeling that screening may trigger depression, present attitudinal barriers to screening compliance (Hart and Morris, 2008).

Patient referral
The first good practice point relating to patient referral (see Table 2) was included because mood screening assessments are not in themselves diagnostic, and where individuals have scored positively on such an instrument they are likely to need a further, more detailed assessment. This does not always have to be completed by a psychologist, psychiatrist, or counsellor, but can be conducted by appropriately trained members of the stroke MDT.

Stroke services should consider how they will develop the psychological skills of team members (e.g. formal training events, journal clubs, discussions in seminars; see Hart and Morris, 2008) to enable them to make reliable assessments of mood and emotional disturbance. In addition to treating patients with the most complex emotional problems, psychologists have an important role in training stroke teams, as well as providing subsequent support and consultancy.

Emotional lability
A Cochrane review of treatments for post-stroke emotional lability (House et al, 2004) identified five small (n<30 participants) RCTs of antidepressants, and one larger RCT (Choi-Kwon et al, 2008; n=152 participants) appeared in the literature after the Cochrane review was published. Most studies reported positive effects of treatment, defined as 50% reduction in abnormal emotional behaviour. However, studies did not identify factors associated with treatment response, such as which individuals benefit, or for how long treatment should be given. Both are important considerations, and remain to be elucidated by future research. An important – though perhaps somewhat underplayed – finding was that side effects (e.g. nausea, gastrointestinal discomfort) were often experienced, and treatment drop-outs in the studies ranged from 5–30%. Antidepressants may be an effective treatment for post-stroke emotional lability, but their impact may be limited if those prescribed medication choose to discontinue it prematurely.

No trials testing psychological treatment for post-stroke emotional lability have been conducted. However, a good practice point was included in the SIGN 118 guideline, that stroke survivors and their families should be offered information so that unnecessary distress does not result from misunderstandings about this perplexing condition.

Stroke services should aim to produce easy-to-read literature that explains emotional lability, and offer patients and families reassurance and simple suggestions about how to cope with the condition. The literature could mention side effects of antidepressants, because there is evidence in non-stroke populations that individuals with depression may tolerate temporary medication side effects when they know about them in advance (Lin et al, 1995). Because the condition is common, information/advice about emotional lability should be included in patient and carer education programmes (e.g. Champion, 2006).

Prevention of post-stroke depression
There was no evidence in a recent Cochrane review (Hackett et al, 2008a), or in two previous reviews (Bhogal et al, 2005; Chen et al, 2007) for the effectiveness of antidepressants in the prevention of post-stroke depression, i.e. giving these drugs prophylactically to prevent worsening of mood. The recommendation not to prescribe antidepressants to prevent post-stroke depression was strong (see Table 2).

Four RCTs of psychological therapy (involving more than 900 participants) were identified in Hackett et al’s review. There was evidence for the impact of psychological therapies in the prevention of abnormal mood, both motivational interviewing (Watkins et al, 2007) and problem-solving therapy (e.g. House, 2000). The Watkins et al study was a large (n=411) robust study that demonstrated that up to four sessions supporting individuals’ motivation and confidence to achieve therapy targets and health behaviour change, resulted in significantly fewer patients with abnormal mood, compared to usual stroke care. However, the recommendation was downgraded from grade A to grade B in the SIGN 118 guideline because, firstly, the overall treatment effect was small (odds ratio 0.64 (CI 0.42–0.98) for participants meeting criteria for depression at end of treatment). Secondly, the intervention was administered...
by nurses and psychology graduates who had received four days of training and one-to-one supervision from a clinical psychologist, with audio-taped sessions to allow reflection.

Stroke services should be encouraged by the evidence from Hackett et al’s (2008a) review that talking-based interventions can prevent depression, particularly because pharmacological approaches cannot. However, the psychological approaches to preventing depression that are outlined in the research literature may be difficult to implement routinely. It was the current authors’ considered judgement that resource implications would make it very unlikely that stroke teams could implement equivalent psychological therapy in usual clinical care. Instead, a more cost-effective option is proposed in SIGN guideline 118, namely the incorporation of motivational interviewing and problem-solving principles into group programmes.

The authors suggest that patients be given the opportunity to clarify their goals, discuss their expectations of themselves (which may need to be boosted, particularly if mood is already low or self-esteem poor), and, crucially, to voice any ambivalence and perceived blocks to meeting their targets. These procedures could be applied by any member of the MDT who has received training in motivational interviewing, and could be used in goal setting meetings and in other conversations health care professionals have with stroke survivors and their families. Problem-solving therapy has been applied in group settings in conditions other than stroke (e.g. Perri et al, 2001), and involves teaching people how to step back and analyse problems, ‘brainstorm’ potential solutions, choose between alternatives, and carry out a plan and evaluate its success. These approaches might be particularly helpful with individuals who experience problems with executive functioning, although this has not been researched.

**Treatment of post-stroke depression**

A recent Cochrane review (Hackett et al, 2008b) identified 13 RCTs of antidepressants, and four RCTs of psychological therapy, for post-stroke depression. The review found that antidepressants were effective at treating the condition, with a moderate effect size (odds ratio 0.47 (CI 0.22–0.98) for participants meeting criteria for depression at end of treatment). This recommendation was graded A in SIGN guideline 118. However, as with antidepressant treatment for emotional lability, there was evidence of side effects in those trials that reported them (though interestingly, most trials did not). Therefore, a good practice point recommends that clinicians must be vigilant to the possibility of adverse events in those prescribed antidepressant medication (see Table 2). Careful monitoring is important, as is good communication between hospital and community clinicians, if treatment continues following hospital discharge.

The four psychotherapy trials showed no evidence for treatment benefit (Hackett et al, 2008b). However, most studies had methodological problems, and only one was a trial of cognitive-behavioural therapy (CBT), arguably the psychotherapy with the greatest evidence of effectiveness in the non-stroke population (see Dobson and Dobson, 2009). The single CBT trial (Lincoln and Flannaghan, 2003) used a manual-based approach delivered by nurses with minimal training in CBT methods. Treatment was often initiated only weeks after stroke, and delivered over only 10 sessions, and so may have been delivered too early, or with insufficient intensity, to bring about clinical improvement. There was no evidence to recommend against psychological treatment for post-stroke depression, but in the guideline it is proposed that practitioners should monitor treatment response carefully.

Stroke services should develop protocols which detail criteria for referral for psychiatric and psychological specialist opinion and treatment. It is essential that stroke services have dedicated access to clinical and health psychology, because some individuals will prefer talking-based approaches to medication, and not all individuals respond to antidepressants. Individual team members may develop advanced skills in a psychological therapy, e.g. CBT, but will need to ensure that psychologist colleagues, or someone else who is suitably qualified, provide supervision. When offering psychological therapy, the authors believe it would be prudent for clinicians to propose a fixed number of sessions (with review built in), because there is evidence that if treatment is to be successful, most individuals with acute onset symptoms show some mood improvement after a small number of sessions (e.g. 5 sessions; Kopta et al, 1994).

Practitioners should note that environmental factors can impact on mood, both negatively (e.g. social isolation; Ouimet et al, 2001) and positively (e.g. the opportunity to listen to one’s choice of music; Sarkamo et al, 2008). The MDT has a role to play in addressing environmental factors that impact on mood. For example, hospital wards are sometimes busy, noisy
areas and patients often spend long periods of time under-occupied and socially isolated (Bernhardt et al, 2004). Noisy environments may be especially aversive for individuals with attentional problems (Champion, 2006), and social isolation will lead to disillusionment and boredom in the majority of patients (Ouimet et al, 2001). The authors suggest that these issues could be tackled by ensuring access to quiet areas, and by introducing programmes of group activities.

**Post-stroke emotional adjustment**

This topic was a new inclusion in SIGN 118. Disappointingly, the literature review did not identify systematic reviews or controlled trials testing interventions for augmenting stroke survivors’ self-esteem or improving body image, and so there was no evidence on which to base a recommendation for these issues.

One RCT was identified, however, which tested a stroke workbook intervention (Johnston et al, 2007). The workbook provided information about stroke and patterns of recovery, and offered guidance on coping skills using CBT techniques. People who received the workbook had higher self-efficacy, i.e. confidence in their recovery, than those who did not receive it. Because the study provided no specific evidence for the benefits of increased confidence, the recommendation to address beliefs and attitudes using workbook approaches was offered as a good practice point only. However, stroke patients who used the workbook were found to have reduced disability, a finding that has been demonstrated in other stroke studies, e.g. Partridge and Johnston (1989).

Stroke services need to consider the impact of individuals’ beliefs and attitudes on their rehabilitation progress. McKevitt et al (2004, p1501) noted in their review of the qualitative literature that ‘greater sensitivity to patients’ beliefs’ would be beneficial to recovery. The current authors propose that assessment of the following may be helpful:

- How much does the individual believe outcome is due to their own efforts (i.e. perceived personal control), and how much do they feel others, or perhaps chance, are responsible for bringing about improvements?
- What do they believe was responsible for their stroke, and can these factors be controlled, e.g. poor diet (modifiable) or heredity (non-modifiable)?

Stroke workbook approaches are now widely available (for example the Bridges approach; Jones et al, 2009) and allow rehabilitation practitioners to assess individual responses to questions such as these, and to provide individuals with opportunities for guided self-learning.

**DISCUSSION**

In this article the authors have outlined the SIGN clinical practice recommendations for disorders of mood and emotional behaviour after stroke, and explained the evidence base from which the recommendations were developed. This article complements SIGN guideline 118 by suggesting ways in which clinicians can translate recommendations into clinical practice, thereby improving the psychological care offered to stroke patients and their families.

What are the main practice recommendations? Essentially, mood and emotional behaviour disorders are common in this population, routine screening must be undertaken, and treatment – both pharmacological and psychological – should be offered to those who require it. There is research evidence for the effectiveness of pharmacological treatments for emotional lability and post-stroke depression, and evidence that psychological therapies play a role in preventing depression, and may also be helpful in promoting psychological adjustment. Regardless of approach, all treatments should plan for careful review and follow-up.

However, clinicians should be aware of the gaps in the evidence base. Only small numbers of treatment studies have been undertaken in this area of stroke care, and definitive conclusions are few. Consider talking-based treatments for post-stroke depression. The absence of evidence for their effectiveness is not the same as evidence of treatment ineffectiveness, because definitive outcome studies for psychotherapy have not been undertaken. It is particularly worrying that there are no outcome data for the psychological treatment of emotional lability. Stroke textbooks advise clinicians to treat the condition using a combination of relaxation strategies, distraction techniques, cognitive reappraisal of symptoms, and also recommend educational approaches (e.g. Champion, 2006). The question is whether these interventions represent an effective use of clinical time; only well-conducted research will provide an answer.

Clinical guidelines can be useful in highlighting routine clinical practices that are not informed by evidence of clinical effectiveness (Woolf et al, 1999).

Similarly, much remains to be clarified about pharmacological treatments. Antidepressants are evidently effective for post-stroke depres-
sion and emotional lability, but little is known about how long medication should be given, and is it not known which patients benefit. The SIGN 118 guideline recommends that clinicians weigh up costs and benefits on a case-by-case basis in view of possible side effects and adverse events. After all, stroke patients are likely to be elderly, have concurrent illness(es) and be susceptible to unwanted drug interactions (Shuaib and Hachinski, 1991). It goes without saying that patients will only be satisfied with treatments that offer more benefits than costs. This is why – as Table 1 shows – KQs were framed around treatment effectiveness and treatment acceptability. Unfortunately none of the studies that were reviewed assessed the acceptability of interventions, for example by measuring patient satisfaction or perceived benefit. This is unquestionably an oversight, because individuals have been shown to benefit most from treatments that suit their preferences (e.g. Lin et al, 2005).

Notwithstanding the above caveats, how can clinicians use guidelines to make better decisions? How can the evidence that does exist be incorporated into their practice? As many commentators have noted, the development of good guidelines does not guarantee their effective use in practice (Grimshaw and Russell, 1993; Feder et al, 1999; Woolf et al, 1999). Documents like SIGN 118 provide general recommendations which need to be specifically tailored to local circumstances – local in terms of the particular clinical settings in which care is delivered, but also in terms of the individual patients with whom clinical decisions are taken.

Clearly, not all stroke settings are configured in the same way. Although services in the UK tend to have poor access to psychological services, there are regional variations in provision, with some areas having less accessible psychological expertise, and perhaps greater training needs, than others (Bowen et al, 2005). Resource implications are important, as are feasibility issues such as staffing levels in each setting. The advantage of adapting national guidelines to local circumstances is that it encourages a sense of ownership among members of a clinical team, which has been shown to be a major factor in acceptance and implementation of guideline recommendations (Grimshaw and Russell, 1993). Feder et al (1999) propose the establishment of short-term ‘local adaptation groups’ whose job is to adapt a guideline for local use.

Of course, applying guidelines to individual care always requires good clinical judgement. This is because decisions still need to be taken on a case-by-case basis. For example, different kinds of talking-based therapies can be delivered (from supportive listening to structured therapies, such as CBT), different classes of antidepressants can be administered with a variety of dosing regimens, and workbook approaches may include a diverse set of procedures. Health care professionals should be particularly aware that some types of patients may be served less well by guideline recommendations than others. Individuals with post-stroke communication impairments, such as aphasia, may be unable to participate in talking therapies (Code and Herrman, 2003). Challenges also exist with medication prescription in this patient group, such as how to establish valid consent to treatment, and how to measure treatment response (see Townend et al, 2007 for a discussion of these issues). These areas of clinical practice have received very little attention.

CONCLUSIONS

As a final point, guidelines can act as a stimulus for research. Several of the recommendations were based on expert opinion only. The authors hope that this paper has helped to clarify where gaps in the evidence lie, and to point towards research priorities. Guidelines can be used to encourage funding agencies to support studies designed to fill gaps in the evidence base. In a cash-limited healthcare system it is essential that health care professionals continue to demonstrate the effectiveness of their work and take whatever steps they can to support this effectiveness based agenda. UTR

Conflict of interest: none

Acknowledgements: The authors would like to thank the following people for their help and support: Professor Lorraine Smith, Chair of the SIGN 118 Guideline Development Group; Dr Roberta James, Programme Manager, SIGN; Michelle Hilton-Boon, Information Officer, SIGN; and fellow members of the Guideline Development Group.


**KEY POINTS**

- Disorders of mood and emotional behaviour are common consequences of stroke, and have a negative impact on rehabilitation outcome.
- The SIGN 118 stroke rehabilitation guideline aims to improve quality of care and therefore patients' rehabilitation outcomes. Four key questions (KQs) in SIGN 118 relate to disorders of mood and emotional behaviour.
- The SIGN 118 guideline recommends both psychological and pharmacological interventions for post-stroke disorders of mood and emotional behaviour.
- The translation of guideline recommendations into clinical practice is not always straightforward. Time, enthusiasm and resources are required. Suggestions are made as to how stroke services can implement recommendations to improve the psychological care offered to stroke patients and their families.