

Care Services Improvement Partnership CS/P



Mental Health in England

# Guidance on action to be taken at suicide hotspots



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# Brief outline and aims of the guidance

This best practice guide has been developed to:

- 1. support the development of effective collaboration by local multi-agency suicide prevention groups;
- 2. assist such groups to identify particular places within their local area that are 'hotspots' for suicide and to take appropriate steps to improve safety and deter acts of suicide at those locations;
- 3. contribute to the implementation of the National Suicide Prevention Strategy for England and to achieve an overall reduction in suicides, in line with the target set out in the White Paper Saving Lives: Our Healthier Nation (Department of Health, 1999).

There are two parts to the guidance. The first part deals with the definition of 'suicide hotspot', outlines the range of measures that can be taken to improve safety at such locations and summarises the evidence of effectiveness.

Part two describes a process for identifying and managing suicide hotspots at local level based on interagency collaboration. The model has been developed by means of 'action learning', using the county of Devon as a pilot site.

# PART 1 BACKGROUND

### INTRODUCTION

# 1. What is a suicide hotspot?

The term 'suicide hotspot' has two possible meanings. It is frequently used to refer to both:

- a) a geographical area with a relatively high rate of suicide among its resident population (e.g. a town, borough, county or country), and
- b) a specific, usually public, site which is frequently used as a location for suicide and which provides either means or opportunity for suicide (e.g. a particular bridge from which individuals frequently jump to their deaths).

This guidance deals with hotspots in the second sense and the term will be used in this sense throughout.

Many well-known locations throughout the world have become associated with suicidal acts. They include both manmade structures and natural sites, some of which have iconic status or significance. The Golden Gate Bridge in San Francisco, the Sydney Harbour Bridge, the Empire State Building and Niagara Falls are among the top suicide sites worldwide. Such places seem to act as magnets, drawing suicidal individuals to them.

In the UK, Beachy Head cliffs in Sussex and the Clifton Suspension Bridge in Bristol are notorious as suicide sites. However, there are also many less well-known locations, and every local area will have sites and structures that lend themselves to suicide attempts.

In many cases, the place itself provides the means of suicide. The cliffs at Beachy Head, for instance, supply the means of suicide by jumping, in the same way that a bottle of tablets supplies means of suicide by poisoning or overdose.

# 2. How will action at hotspots help to reduce the suicide rate?

In 1999, in its White Paper Saving Lives: Our Healthier Nation, the government set a target to reduce the suicide rate by at least one-fifth by the year 2010 (Department of Health, 1999). The National Suicide Prevention Strategy for England was launched in 2002, in order to guide and coordinate efforts to achieve that target. Goal 3 of the Strategy is to reduce the availability and lethality of suicide methods (Department of Health, 2002).

Three conditions are necessary in order for a suicide attempt to take place. The individual must:

- a) resolve to die or to give up on life;
- b) decide on a method (e.g. hanging, overdose, jumping);
- c) obtain the means by which to carry out the plan (e.g. rope, tablets, jumping site).

There is general agreement that it is possible to interrupt the suicidal process by making it difficult for people to obtain the means by which to kill themselves. Restricting access to means of suicide is recognised as having the potential to save lives (Cantor & Baume, 1998; Gunnell, Middleton, Frankel, 2000). The most compelling evidence for this comes from the dramatic reduction in suicides that followed the withdrawal of toxic coal gas from British homes during the 1960s and early 70s (Kreitman, 1976).

Falls in suicide rates have also been shown to be associated with the introduction of catalytic converters in cars (Amos, Appleby, Kiernan, 2001), changes in firearms legislation (Cantor & Slater, 1995; Beautrais, Fergusson, Horwood, 2006) and the introduction of limits on sales of paracetamol (Hawton, Townsend, Deeks et al, 2001; Hawton, Simkin, Deeks et al, 2004).

Some 'method substitution' inevitably occurs. If one means of suicide is made unavailable. there will always be people who are determined enough to seek out an alternative means of killing themselves. Measures to limit the availability of means are aimed mainly at reducing those suicidal acts that are impulsive or are the result of an acute or temporary crisis. Making it difficult to access the means of suicide is a way of 'buying time' and giving the individual a chance to reconsider. It does not solve the problems that gave rise to the suicidal impulse, nor lessen the mental suffering of the individual, and is therefore a fairly crude approach to prevention (Gunnell, Middleton, Frankel, 2000). Nevertheless, it is recognised as effective and has a place in the suicide prevention strategy of every nation that has one (Simkin, Hawton, Sutton et al, 2005).

Restricting access to lethal means is an important element in an overall suicide prevention strategy because it targets the whole population and provides a way of reaching the many at-risk individuals who are not in contact with health and social care services. Identifying and managing frequently used locations is one way of restricting access to the means of suicide. It removes the spotlight from high-risk people and focuses on high-risk places.

# 3. What types of location are likely to be hotspots?

High-risk places are those that provide opportunities for suicide by:

- jumping from a height
- placing oneself in front of a moving vehicle
- other methods, particularly car exhaust poisoning

## Suicide by jumping from a height

Locations offering opportunities for suicide by jumping include bridges (vehicle and pedestrian), viaducts, high-rise hotels, multistorey car parks and other tall buildings, cliffs and other topographical features.

Jumping from a high place is a relatively uncommon method of suicide. In 2004, there were just 154 cases in England and Wales, accounting for 3% of all suicides and open verdicts (Office for National Statistics, 2005). In some other countries of the world, the proportion is very much higher (Gunnell & Nowers, 1997).

However, suicidal jumps almost inevitably occur in public locations, have a high fatality rate (Spicer & Miller, 2004) and are highly traumatic for witnesses and people living below the jump site (Reisch & Michel, 2005). Jumps also tend to attract media attention, which helps places to gain macabre reputations and can lead to further copycat suicides. All the world's leading suicide hotspots are in fact jumping sites.

# Suicide by jumping or lying in front of a moving vehicle

Suicide by jumping or lying in front of a moving object is again fairly uncommon in this country. The Office for National Statistics (ONS) recorded 150 such deaths in England and Wales in 2004, occurring on road and rail networks combined. Again, this equates to 3% of all suicides and open verdicts in England and Wales for that year.

The Rail Safety and Standards Board (RSSB) collects its own data on railway suicides and, using slightly different criteria from the ONS, recorded 181 such deaths in the same year on the railways alone. Of these, approximately 50-60% occurred on open track, 30% at stations and 10% at level crossings.

These figures are very low compared with other European countries that have much denser rail networks (Kerkhof, 2003). However, the emotional and psychological damage caused to drivers and other witnesses of suicides on the transport networks is immense (Williams, Miller, Watson et al, 1994). Services are disrupted and, in the event that a train is derailed, further fatalities and serious injuries may result.

The RSSB is taking the problem of railway suicide very seriously and is working hard to achieve the target of a 20% reduction in railway suicides set out in the National Suicide Prevention Strategy. A major report on Suicides and Open Verdicts on the Railway Network (SOVRN) was commissioned in 1999 to identify ways of reducing the incidence and impact of railway suicides.

Following publication of the report in 2003, the former Rail Fatalities Management Group (disbanded in April 2006) was set up, and as part of this work sponsored a series of visits to station operators by RSSB and Samaritans. During these visits, the issues were discussed and various counter measures examined. As a result, some station operators are planning to display Samaritans posters, offer direct phone links to Samaritans and send staff on sessions with the Samaritans providing suicide awareness training for railway staff and counselling for members of staff affected by a railway suicide. Network Rail is also carrying out an extensive programme of fencing to restrict public access to rail tracks.

London Underground Limited (LUL) has also recently completed a pilot initiative at one of its stations in an effort to reduce suicides and suicidal behaviour on the London Underground. LUL has implemented measures including: staff training, increasing the number of CCTV cameras in strategic positions, Samaritans posters and Samaritans phones.

The Highways Agency, which is responsible for the construction and maintenance of motorways and major trunk roads in England, is also keen to take a proactive stance towards suicides and is currently introducing preventative measures at a number of motorway bridges from which suicidal jumps have been made.

### Suicide by other methods

No figures are available for suicides by other methods that occur at high-risk public locations. However, two studies (Pearson, 1993; King & Frost, 2005) have highlighted the opportunity for suicide presented by secluded car parks or other isolated rural locations, where an individual can sit undisturbed in a car for as long as is necessary in order to die. Such locations are associated mainly with car exhaust poisoning. They do not supply the means of suicide as such, but do provide peace and seclusion, which is a vital ingredient in many suicides.

The rate of car exhaust poisoning is steadily declining in the UK, thanks to modifications in vehicle design. In 2004, the ONS recorded 225 cases of car exhaust poisoning in England and Wales, accounting for 4.5% of all suicides and open verdicts. Almost nothing is known about where these take place and research is difficult because HM Coroners are currently not required to record the location of a suicidal act. However, it is likely that public car parks and laybys are used in a significant proportion of cases.

Analysis of pilot data collected in Devon revealed that 76% of all car exhaust poisonings occurred in public places, and these included car parks at beauty spots, in well-known areas of wood and moorland, on commons and in other rural locations. The pattern for each county is likely to be different and will be determined by local geography. Analysis of local data is essential in order to identify frequently used locations.

Any site at which a suicide has occurred can achieve notoriety and quickly become a hotspot, particularly if the death is reported extensively in the news media. A prime example of this is Cheung Chau Island, a popular 'getaway' destination off the coast of Hong Kong. After newspapers publicised the fact that a visitor to the island had brought about his own death by burning charcoal in a rented holiday flat, the island became popular as a venue for suicide and many more visitors subsequently killed themselves using the same method (Yip, 2005). It is well known that media reporting of suicides can result in copycat behaviour, and suicidal acts carried out in public places are more likely to attract media attention than those carried out in private homes.

The contribution to the achievement of the national suicide reduction target that will be made by introducing safety measures at specific high-risk sites is likely to be relatively small. Nevertheless, suicides that occur in public places have far-reaching consequences for the health of others and thereby contribute to the overall burden of mental illness and psychological distress.

# 4. How many suicides are needed to make a hotspot?

More than one suicide at a particular site, in any period for which there are records, should give cause for concern. This is sufficient to demonstrate that the site has appeal for suicidal individuals and offers either means or opportunity for suicide. However, findings from the SOVRN report into suicides on the railways suggest that hotspots may be transient, shifting rapidly from one part of the network to another.

There are varying degrees of 'hot'. Decisions on what action to take will depend on the number and nature of suicidal acts, the frequency with which they occur and the fatality/serious injury rate, as well as on site-specific factors.

High-risk locations may vary in size. A single car park on a common may have been the venue for more than one suicide. and would therefore be considered a hotspot. However, there may be a number of car parks on a common that have had one suicide each. In this case, it would be sensible to treat the common as a whole as a hotspot for suicide. Similarly, a short stretch of motorway or of cliffs might be designated a hotspot if there has been a spate of jumping incidents, even though these may have occurred at different points.

A suicide pact, in which two or more individuals die together by arrangement, should be counted as a single incident.

Local suicide prevention groups will need to exercise judgment and make their own decisions as to the size and boundaries of each site, based on interpretation of local data and knowledge of local geography.

# 5. Why is inter-agency collaboration important?

Managing suicide hotspots involves complex questions of ownership, responsibility and resources (Kerkhof, 2003).

Partnership is increasingly being recognised as vital to effective delivery of public services. The government's new strategy for local government includes the development of Local Area Agreements (LAAs), which are designed to strengthen partnership working at local level and facilitate more co-ordinated service delivery. LAAs provide a mechanism for setting local priorities and developing local solutions and delivery plans, in health as well as in other key policy areas. Multi-agency Local Strategic Partnerships, including public services, private companies, voluntary organisations and community groups, are intended to play a central role in drawing up the agreements.

The White Paper Our Health, Our Care, Our Say (Department of Health, 2006a) sets out a similar vision to deliver joined-up community services that are responsive to local patient needs and are prevention-focused. It assigns joint responsibility to Directors of Public Health and Directors of Adult Social Services for undertaking regular strategic needs assessments to determine local priorities for action (see also Department of Health, 2006b).

The railway industry is also setting up, under the chairmanship of Network Rail, a series of Community Safety Partnership Groups, whose remit is to agree local strategies for managing a range of risks, including suicide, vandalism and assault.

No single agency is responsible for suicide prevention. Health and social care services have a statutory responsibility to identify and manage at-risk individuals with whom they come into contact. Police and other emergency services have a key role to play, as do a number of voluntary organisations. Local authorities, agencies that manage and maintain the transport networks, owners of high-rise buildings, private landowners and bodies such as the National Trust that owns long stretches of coastline all have a responsibility for ensuring public safety.

At the same time, in considering what action to take at suicide hotspots, the interests of environmentalists, ramblers and many local community groups will need to be taken into account. Both the economic cost and the environmental impact of interventions need to be considered.

For these reasons, we recommend wide inter-agency co-operation in the identification and management of suicide hotspots. This should form part of the local arrangements for delivery of interventions towards achieving the national suicide reduction target and should be seen as part of a whole systems approach to suicide prevention.

### INTERVENTIONS AT HOTSPOTS: A REVIEW OF THE EVIDENCE

Although the numbers involved will be relatively small, there is good evidence that lives can be saved by either impeding or deterring suicide attempts at high-risk locations. This section provides a brief summary of the evidence from both published studies and other sources on the measures available and their effectiveness.

### 1. Physical barriers

The most effective form of prevention at jumping sites is a physical barrier, which literally restricts access to the drop. Safety nets serve a similar purpose but rescue from a net may be difficult should a jump occur. A study in Bern, Switzerland showed that suicides at the Muenster Terrace, a well-known jumping site in the old city, ceased completely following the installation of a safety net. Furthermore, there was no change at other nearby jumping sites, suggesting that would-be jumpers did not simply go elsewhere (Reisch & Michel, 2005).

Further compelling evidence comes from a New Zealand study of the effect of removing barriers from a city bridge. Safety barriers that had been in place for 60 years were dismantled as a result of pressure from community members, who were concerned that they were unsightly. The study showed that the removal of barriers led to a five-fold rise in the number of suicides from this particular bridge, while suicidal jumps at other nearby sites decreased (Beautrais, 2001).

In the UK, the Clifton Suspension Bridge in Bristol erected barriers in 1998 and a study of their effect on local patterns of suicide is currently in progress. Many of the most popular jumping sites around the world have installed barriers of some sort and in every case the authorities claim that significant reductions in suicide rates have been achieved. These include the Bloor Street Viaduct in Toronto. the Jacques Cartier Bridge in Montreal, The Sydney Harbour Bridge, the Gateway Bridge in Brisbane, the Empire State Building and the Eiffel Tower.

Finally, in a small but persuasive study based on interviews with individuals who survived suicidal jumps from the Golden Gate and San Francisco-Oakland Bay Bridges, all of the survivors called for the construction of suicide barriers (Rosen, 1975).

Any form of obstruction at a high-risk site not only gives the individual time to reconsider but, by delaying the suicidal act, may also increase the chances of intervention (Lindqvist Jonsson, Eriksson et al., 2004).

The issue of erecting suicide prevention barriers or nets at particular sites is invariably a highly contentious one. There is often strong public opposition on aesthetic grounds, particularly if the site or structure is a famous landmark. However, a study conducted by engineering undergraduates at the University of California in Berkeley show that barriers can be both effective and aesthetic. After years of fierce campaigning, the installation of barriers at the Golden Gate Bridge in California is still being resisted on grounds of aesthetics alone, despite a steady toll of around 25 suicides per year (one every two weeks on average). However, in 2006 the Board of Directors of the Golden Gate Bridge Highways and Transportation District voted to approve a 2 year study on possible alterations to the bridge. The first phase would review past studies and review suicide barrier designs such as a net under the bridge, a fence added to existing railing, or total replacement of existing railings. The second phase would conduct a more thorough engineering, environmental and cost study of the designs. On larger structures, such as major river crossings, they can also present complex engineering challenges. Wind resistance is always a major issue on bridges, but there will be other difficulties that are peculiar to each structure. due to the fact that bridges are all built to individual designs.

Physical barriers are likely to be the most costly of available measures, and resolving the issue of financial responsibility can be difficult (Kerkhof, 2003). Barriers are also permanent and therefore may not be warranted unless it is clear that a location will remain attractive as a suicide site for the foreseeable future. Particular sites may only be hotspots for a short time.

Nevertheless, raising the height of an existing parapet or installing a further barrier of some sort is a serious option to consider, if a site has been used for suicidal jumps on two or more occasions or if there have been acts of vandalism or other incidents that endanger the public, such as objects being thrown from a bridge onto a road or railway below.

There are numerous options as regards materials and designs. The main condition is that the material should not provide any foothold and the barrier itself should be as difficult as possible to scale. A total height of between six and nine feet is considered to be effective (Berman et al, 1990).

While the cost of installing safety barriers may be high, warnings have been issued in the USA that legal action could be taken by relatives, either of a suicide victim or of a person killed or injured by a falling body, if a site is well known for suicide and the authorities have not taken action to improve safety (Berman et al, 1990).

# 2. Signs and telephone hotlines

Signs encouraging distressed or suicidal individuals to seek help and displaying a contact number for the Samaritans, are in place at a number of locations in the UK that have been identified as hotspots, including Beachy Head cliffs, Clifton Suspension Bridge in Bristol and many less famous sites.

Signs displaying the Samaritans' national help-line number and the location of the nearest public telephone were positioned in selected car parks in the New Forest in Hampshire as part of a multi-agency suicide prevention initiative, after it was discovered that they were associated with high numbers of car exhaust suicides. A 3-year evaluation of the scheme showed a significant drop not only in the number of car park suicides, but also in the total number of suicides in the New Forest district (King & Frost, 2005). A further 3-year evaluation (unpublished) has shown that the number of car park suicides has remained low, and that most of the suicides that have subsequently occurred in the New Forest have been in car parks without signs.

On the Mid-Hudson Bridge in the US, dedicated suicide prevention hotlines are linked directly to a 24-hour Psychiatric Emergency Service. A two-year evaluation of the scheme showed that, out of 39 would-be jumpers, 30 used the phone to call for help and, of these, only one went on to make a fatal jump, whilst 5 of those who did not use the phone jumped to their deaths (Glatt, 1987). Crisis hotlines are also installed on the Golden Gate Bridge and at many other jumping sites worldwide.

Signs promoting help seeking and advertising appropriate sources of help are almost invariably the best initial step at any location that is causing concern. They are low cost and capitalise on existing services, both voluntary and statutory. such as Samaritans and NHS Direct. Samaritans' national office is able to advise on the wording and design of signs. Analysis of local patterns of suicide will determine whether or not there is a need for signs in minority languages and contact numbers of organisations offering support to specific minority groups.

Another major advantage of signs is that they are not method-specific. Analysis of pilot data collected in Devon revealed that a number of local hotspots were associated with more than one method of suicide, e.g. jumping and hanging, or jumping and carbon monoxide. Strategically placed and carefully worded signs have a chance of speaking to all individuals contemplating suicide, regardless of their chosen method, whereas physical barriers only prevent jumping. Again, close scrutiny of local patterns is essential.

Objections to Samaritans signs have been raised at some known hotspots, on the grounds that they may 'promote' the location as a venue for suicide. There is no evidence to support these fears.

The main limitation of both signs and telephone hotlines is that they rely on the individual being ambivalent enough about suicide to make the call.

### 3. Suicide patrols

Dedicated suicide patrols represent a more proactive approach than signs and telephones, and have been tried at a number of locations worldwide. There are no published studies, however, and the evidence of effectiveness is weak. The Golden Gate Bridge in California is patrolled every day during daylight hours by paid suicide prevention officers. It is claimed that there has been a significant reduction in fatal jumps since the patrols were introduced in 1996, and that human contact is more powerful in preventing suicidal jumps than a physical barrier.

Other sites attracting high numbers of suicides are patrolled by committed volunteers. At Beachy Head cliffs in Sussex, a team of volunteer counsellors is on duty every evening. The scheme is run by a charity that was set up by a local man whose wife jumped to her death from the cliffs, and is credited with having reduced the number of fatal jumps. Depending on the length of the bridge or size of site, a duty team may need to be supported by CCTV cameras in order to spot distressed individuals.

Paid suicide patrols are a highly costly option, which is unlikely to be justified unless a location attracts very high numbers of suicides and there is a very clear pattern of use at certain peak times. The alternative is to rely on volunteers. Either way, patterns of suicides at the site will need to be studied closely to identify times of the day, week, month or year at which patrols or counsellors are likely to be most effective.

There is some concern, based on anecdotal evidence, that an ill-timed intervention may precipitate a suicidal act (Berman et al, 1990).

# 4. Training for staff of non-health agencies working at or near hotspots

If a dedicated suicide patrol is not a realistic option, there may be other staff working at or in the vicinity of a high-risk location and who can play a role in identifying individuals in distress, alerting emergency services and intervening if necessary.

A telephone survey of 10 major UK toll bridges found that all bridge authorities expected their staff to be alert to the possibility of suicide attempts, and all had clear protocols for staff to follow in the event of a person acting suspiciously. However, only 1 out of the 10 provided specific training in suicide awareness or suicide prevention. Two others had had occasional staff briefings given by either the Samaritans or the local police.

Samaritans can provide packages of suicide awareness training tailored to the needs of individual organisations. They are currently working with the Train Operating Companies to deliver a training programme to station staff, in order to increase staff confidence in identifying and responding to at-risk individuals.

Samaritans' training for local authority and Forestry Commission staff was included as part of the New Forest Suicide Prevention Initiative (King & Frost, 2005), but was not evaluated.

Highways Agency Traffic
Officers (HATOs) who patrol
the motorways, car park
attendants, countryside rangers
and staff of many other nonhealth agencies whose work
regularly takes them near known
hotspots may benefit from
receiving basic training in suicide
awareness and responding to
people in distress.

# 5. Restrictions on media reporting

It is known that news reports of suicides are associated with a subsequent increase in suicides, and that the greater the media coverage, the greater the subsequent increase in numbers (Pirkis & Blood, 2001). Conversely, restrictions on reporting of suicide have been shown to be associated with sustained reduction in subsequent suicides (Sonneck, Etzersdorfer, Nagel-Kuess, 1994). Detailed reporting of the methods used is known to encourage imitation (Sonneck. Etzersdorfer, Nagel-Kuess, 1994; Yip, 2005).

Suicides that occur in public places and involve 'spectacular' acts such as jumping from landmark structures or sites are more likely to attract media attention than those that occur in private homes.

Negotiating with the news media to limit reporting is therefore a vital element in the management of suicide hotspots. Following recent revision, the Press Complaints Commission Code of Practice now deals specifically with reporting of suicide.

A new clause, introduced to prevent copycat suicides, demands that care be taken to avoid excessive detail about the method used (http://www.pcc.org.uk/cop/practice.html). This should provide a basis for discussions between local stakeholders and the media. In addition, Samaritans have published media guidelines in downloadable format (http://www.samaritans.org/know/pdf/media.pdf).

Agreement should be secured from local news editors to abstain not only from reporting on actual cases of suicide at high-risk sites, but also from reporting on any preventative measures being introduced at the site, since this too may draw attention to the site's potential as a suicide spot (King & Frost, 2005).

# 6. Deciding between available options

Each site under consideration will be an individual case and subject to local conditions. The choice of measures will depend largely on the size of the problem.

The number of suicidal acts, their nature (method of suicide), the frequency with which they occur and the fatality/serious injury rate will determine what level of intervention is deemed necessary at a particular site. Engineering, environmental considerations and pressure

from local interest groups will also influence the decision.

Other options to consider are improved CCTV and lighting/ visibility at particular sites. There is little evidence that these measures used in isolation prevent suicides unless considered as part of a package of measures.

### SUMMARY OF AVAILABLE MEASURES: PROS AND CONS

	Pros	Cons
Physical barriers	<ul> <li>good evidence of effectiveness;</li> <li>increase chances of intervention by delaying the jump;</li> <li>recommended by survivors of suicidal jumps;</li> <li>prevent other acts of vandalism that endanger public, e.g. throwing things.</li> </ul>	<ul> <li>aesthetic considerations, particularly at famous landmarks;</li> <li>in some cases may present complex engineering challenges;</li> <li>high cost in some cases;</li> <li>permanent;</li> <li>method-specific.</li> </ul>
Signs and telephone hotline	<ul> <li>good evidence of effectiveness for signs alone;</li> <li>not method-specific;</li> <li>low cost;</li> <li>use existing voluntary services, e.g. Samaritans.</li> </ul>	rely on suicidal individual to make the call.
Suicide patrols	human contact may be important.	<ul> <li>weak evidence of effectiveness;</li> <li>paid patrols costly;</li> <li>may need to rely on volunteers;</li> <li>ill-judged intervention may precipitate suicidal act;</li> <li>peak high-risk times need to be identified.</li> </ul>
Training for staff of non-health agencies working at or near hotspots	<ul> <li>increased likelihood of identifying individuals in distress;</li> <li>increased confidence in responding to individuals in distress;</li> <li>increased likelihood of emergency services being alerted in time.</li> </ul>	<ul> <li>likelihood of any staff member encountering a potential suicide may be small;</li> <li>no evidence of effectiveness (untested).</li> </ul>
Restrictions on media reporting of suicides at hotspots	<ul><li>good evidence of effectiveness;</li><li>cost-free.</li></ul>	

## PART 2

# IDENTIFYING AND MANAGING SUICIDE HOTSPOTS: A PRACTICAL GUIDE TO INTER-AGENCY COLLABORATION

# ORGANISATION, PLANNING AND PERSONNEL

# 1. The role of an Inter-agency Forum on Self-Harm & Suicide

As a first step, we recommend the setting up of a countywide Inter-agency Forum on Self-Harm & Suicide to improve the integration of services, to share evidence on best practice and to own a portfolio of work aimed at reducing suicide and self-harm.

The Forum may wish to meet at least annually and will draw its membership from senior executive level stakeholders in a wide range of statutory and voluntary agencies, including:

- primary and secondary health care trusts
- adult social services
- children's trusts
- school health services
- police

- criminal justice agencies (prisons and probation service)
- ambulance services
- relevant voluntary organisations (e.g. Samaritans, Mind)
- drug action teams
- service users and carers
- academic partners

The lead in convening and coordinating the Forum is likely to come from within the health and social care community. The Forum should ideally have the capacity and authority to set up and co-ordinate operational-level working groups, and to carry out their recommendations using existing executive channels in its member organisations.

# 2. Planning the hotspots programme

The identification and management of suicide hotspots will constitute one programme of work, possibly sitting alongside others in a broad portfolio of local suicide and self-harm prevention work, to be carried out under the overall leadership of the Forum.

### 2a Programme personnel

The hotspots programme will ideally have; a lead agency; an executive sponsor; a clinical champion and a steering group, in addition to a dedicated programme team.

### Lead agency

The programme will need to be led by a health or social care agency (PCT or specialist Mental Health Trust) and to be located within an existing department with a track record for getting things done, possibly within Research & Development or Clinical Effectiveness.

Where there is an established local Suicide Audit Group, it may make sense for the lead to come from this group, since it will already have mechanisms in place for collecting and analysing data relating to local suicides, feeding back findings to primary and secondary care services and coordinating local arrangements.

The energy and commitment of the lead agency will be a critical factor in securing the engagement of key stakeholders, maintaining momentum and carrying the programme through to completion.

### **Executive sponsor**

This will be someone in a key strategic role, such as Chair of the Local Implementation Team (LIT), with responsibility for development and delivery of local services, a track record of communication and engagement with a wide range of agencies and authority to ensure that decisions are translated into practice.

### Clinical champion

Ideally this will be a senior frontline health or social care professional who has credibility with peers and is able to liaise between the hotspots programme and service planners and providers.

### Programme team

In addition to the above, the following skills are needed within the team:

- quantitative and qualitative data collection and data analysis;
- familiarity with Excel and/or SPSS for handling data;
- use of GIS mapping software;
- effective networking and communication with key stakeholders and partner agencies;
- conference organisation;
- project management;
- secretarial and administrative skills;
- Steering group.

Ideally, the programme team should be able to draw on the expertise of a wider steering group, with service user and carer representation and, where possible, an external expert in suicide prevention.

### 2b Key early tasks

Key early tasks include: drawing a boundary; identifying and procuring necessary resources, and engaging key stakeholders.

### Drawing a boundary

A key early task will be to set the boundary of the area to be included within the programme. If the programme is being conducted under leadership of an Inter-agency Forum whose constituency is countywide, it will make sense for the programme to identify and tackle hotspots across the county. Pilot work demonstrated that it is both appropriate and feasible to operate within a county framework.

## Identifying and procuring necessary resources

It will be necessary to cost the programme fully and to explore existing shared resource, including personnel, administrative support, IT facilities and software and conference facilities, before seeking additional budget within partner agencies. Appendix 1 provides a guide to the possiible resource implications associated with the programme.

### Stakeholder engagement

Identifying and involving a wide range of stakeholders and partner agencies is critical to the success of the programme. The programme team would need to consider:

- a) identifying key agencies and groups with maximum intelligence in relation to potential suicide hotspots, and
- b) identifying a relevant contact within each agency and secure their commitment to the programme.

Key agencies to involve will be those who own, manage or maintain high-risk locations. Their representatives will need to be at an executive level, with authority to allocate budget and take action. Representation may need to come from outside the county (from regional or national boards) in order to carry the necessary authority for action.

A list of potential stakeholders and partner agencies is given in Appendix 2. Local area characteristics and the presence of particular sites and structures will determine the membership, and the full range of relevant stakeholders will not emerge until local data have been analysed and high-risk locations identified.

A stakeholder conference provides a mechanism for bringing interested parties together, capturing local intelligence and specialist knowledge relating to particular types of site or structure, agreeing local priorities and forming planning groups. A suggested format for the conference is outlined below (see: Managing hotspots 1: Agreeing local priorities and Appendix 5). This should not take place, however, until collection and analysis of local data are complete.

### **IDENTIFYING SUICIDE HOT SPOTS**

### 1. Data collection

The key to success in identifying and responding to suicide hotspots is the systematic and ongoing collection of local data on suicides and open verdicts.

Continual real-time collection and interrogation of local data are essential in order to monitor trends and to recognise and respond quickly to any sudden escalation in use of a particular site. Findings from the SOVRN report into suicides on the railways suggest that hotspots may be transient, shifting rapidly from one part of the network to another.

# 1a Who is already collecting it?

The first step is to establish what data are already being collected and by whom, in order to prevent duplication of effort. PCT information analysts and clinical audit managers in secondary care trusts should be consulted to find out whether they are collecting data from coroners as part of their suicide audit process.

Standard 7 of the NSF for Mental Health (1999) included development of local systems for suicide audit by local health and social care communities. If so, data-sharing arrangements should be established that allow for frequent review of hotspots. The NIMHE Primary Care Suicide Audit Tool (available at http://www.eastmidlands.csip.org .uk/suicide db/index.html) provides comprehensive guidance, together with a standard data collection proforma and electronic database. The benefit of the NIMHE tool is that it ensures that all localities are collecting the same minimum data set, thereby permitting comparative analysis at local, regional and national levels.

If no system is in place for suicide audit, or if the data collected do not include 'Location of act' (see below: 2c What data to collect), the team will need to collect the relevant data themselves.

### 1b Where to find the data

The main sources of data on completed suicides and deaths by undetermined injury (open verdicts) are the local coroners and the County Records Office.

All violent, unnatural or sudden deaths are subject to an investigation or inquest by the coroner in whose district the death occurs. Coroners' records contain the information required for identifying the location of acts resulting in suicide or undetermined death.

Permission will need to be sought from each coroner within whose jurisdiction the county falls in order to access the records. Most coroners are willing to facilitate research or audit that is clearly in the public interest, but they are under no obligation to do so. A large county may be served by two or more coroners. Contact details of all coroners in England and Wales are available from the Coroners' Society (http://www.coroner.org.uk/publi c/search.asp), or from County Council web pages.

Searching coroners' records is a time-consuming task and there is unfortunately no shortcut. All coroners report on an annual basis to the Office for National Statistics (ONS), which is therefore able to supply aggregated data on suicides and undetermined deaths. However, the ONS does not receive any information relating to location or timing of the suicidal act, which are the key variables here.

Once permission to access a coroner's records has been received, the Register of Deaths for each year of interest will need to be studied in order to compile a list of suicides and open verdicts. The next step is to request the file relating to each suicide or open verdict and to extract the necessary information. Coroners' practices vary widely, as will the contents of their files.

Typically, an individual file will contain an initial police report, completed at the scene of any sudden or unexplained death, reports of post-mortem examination and any toxicological analyses, reports from medical practitioner(s), witness statements, original suicide notes and any other evidence presented at inquest.

We suggest setting up an Excel or SPSS spreadsheet in advance of the visit and entering relevant data directly from the files using a laptop computer. This removes the need for photocopying and ensures that only such information as is strictly necessary leaves the coroner's office.

After one or two years (depending on volume), coroners' files are moved to the County Records Office for archiving. Access to these will be required for retrospective data collection and will need to be authorised by the coroner, but thereafter the procedure will be exactly the same as for the coroners' offices.

The content of coroners' files is frequently highly distressing and whoever is collecting the data should be offered some form of debriefing.

### 1c What data to collect

For the purposes of suicide audit and research, it is customary to include open verdicts along with suicides. An open verdict category will include cases where suicide was suspected but could not be proven.

Research has shown that some causes of death, including jumping or falling from a height, are particularly difficult to establish as suicides under the coroner system and are more likely to receive an open than a suicide verdict (Cooper & Milroy, 1995; Sampson & Rutty, 1999). The recommended practice is to read the contents of each open-verdict file carefully, make a judgement as to the likelihood of suicide and include those of moderate to high likelihood (Hawton, Appleby, Platt et al, 1998).

Initially, we recommend collection of five years' retrospective data in order to establish a baseline. Thereafter, arrangements will need to be made for updating of the database at 3-6 monthly intervals.

Appendix 3 provides a list of variables to include. Some personal data are needed in order to check that all suicides and open verdicts have been included and that none has been duplicated, and to establish whether or not the suicide took place at the individual's home address. Some demographic information may also be helpful in establishing a profile of users of particular locations. Ethnicity will be important in order to establish whether signs should be provided in minority languages, with contact numbers of organisations offering support to specific minority groups. However, personal details should be kept to a strict minimum (see below: 1e Ethics). The essential variables for identification of hotspots are the location and date of the suicidal act.

### Location of act

The location of the act resulting in death by suicide or undetermined injury may not be immediately apparent. Coroners are required to record place of death, which may not necessarily be where the suicidal act occurred. If the individual was still alive when found and subsequently died in hospital, the hospital will be given as the place of death. Identifying the precise location of the suicidal act will involve reading handwritten statements or free text entries.

If the act occurred in a public place (see below: Public or private location), as much information as possible should be captured in order for the exact location to be pinpointed. The location should be entered in a free text field using place names and as much narrative detail as is available, e.g. "Found in vehicle parked in gateway to field on unclassified road between Foxbridge and Hareswell, just on brow of Crows Hill." For subsequent mapping using Geographical Information System (GIS) software, a postcode will be needed. For public locations, this is unlikely to have been recorded. However, a text field should be set up so that it can be ascertained and entered later. If by any chance an Ordnance Survey grid reference has been recorded, this should be captured, since this will enable the location to be identified with the greatest precision.

### Public or private location

Suicides and open verdicts should be classified according to the status of the location in which the act occurred. Relevant deaths for the identification of hotspots are those resulting from acts carried out in public places. Pilot findings suggest that approximately one third of all suicides and open verdicts fall into this category, whilst the remaining two thirds occur at private addresses.

Definitions of public and private locations will need to be agreed within the team. For purposes of the pilot, a private location was defined as any private home address, including a farmer's own land, but excluding hotels and guest houses unless the permanent residence of the deceased. The definition of a public location included all open land not owned by the deceased, transport networks, public buildings, and hotels and guest houses in which the deceased was a temporary resident.

Local issues and area characteristics will determine the value of including particular types of location in the public category. The pilot was conducted in a county in which the tourist industry plays a major role, and the inclusion of hotels and guest houses in the analysis was considered valuable in order to gauge the extent of 'suicide tourism'.

Psychiatric in-patient units, prisons and probation hostels are known to house high-risk individuals and will already have measures in place to manage suicide risk. These are best classified as private and excluded from the analysis, in order to keep the hotspots programme sharply focused.

### Date and time of act

The date of death, as recorded on the coroner's certificate after inquest, may not necessarily be the date on which the suicidal act occurred. However, in most cases it is difficult, if not impossible, to ascertain the latter. Police reports and witness statements will give details of when the body was found, and this will have to serve as a proxy measure. It is in any case unlikely that a suicide that occurred in a public location will have gone undiscovered for a long time.

## 1d Additional sources of data

Coroners' records will only supply information on completed suicides. There will be many more 'near misses' or serious suicide attempts that did not result in death. The following additional sources of data may be useful for supplementing the picture.

## Police and emergency services

Police operational logs contain details of every incident to which a police officer is called out. These will include some attempted or threatened suicides, where death may have been prevented by the intervention of police officers or members of the public. Local force information officers may be willing to assist in identifying the locations of such incidents.

### Hospital admissions data

Numbers of suicide attempts that are not fatal but result in serious injury may be useful in determining what level of intervention is necessary at a particular site. Hospital Episode Statistics data relating to intentional self-harm are available from public health observatories, but will not help in identifying locations. It may be possible to obtain this information from accident and emergency departments, but it will involve a time-consuming search of individual records, not only of those presenting with self-harm per se but also all cases of major bodily trauma, in order to isolate admissions resulting from self-inflicted injury occurring in a public place.

### Railway fatalities database

The Office of Rail Regulation maintains a database containing information about all fatalities, including suicides, associated with the mainline railway since 1994. The database records a location for each fatality and suicides can be extracted on a county by county basis. The Office is willing to share anonymised data with appropriate organisations wishing to look in more detail at railway hotspots. Details at http://www.railreg.gov.uk/server/show/ConWeb Doc.8070.

### Local stakeholder conference

Many other agencies will possess a wealth of professional knowledge regarding frequently used locations. A stakeholder conference provides the means of capturing local intelligence and personal stories. This will flesh out the picture built up from coroners' records and other sources of raw data. A brief questionnaire sent out to delegates prior to the conference and brought along on the day is helpful in stimulating thinking in advance. A suggested format for the conference is given below (see below: Managing hotspots 1: Agreeing local priorities and Appendix 5).

### 1e Ethics

Collection of data for the purposes of audit, monitoring and service planning does not normally require Research Ethics Committee approval. However, all members of the programme team must be mindful of the need for strict confidentiality in relation to individual data and agreement must be reached within the team as to how this will be maintained.

HM Coroners and County
Archivists will require whoever is
collecting the data to sign an
undertaking of confidentiality and
to anonymise all data.
Identification of hotspots focuses
on places rather than people, so
a minimum of personal data is
required, but there is
unfortunately no reliable way to
way to obtain information on
locations except through
individual records.

It is also worth considering that suicidal acts that occur in public places will generally have been subject to media reporting, so some knowledge will already be in the public domain. Some may have become high profile cases and will be easily identifiable to local audiences. When presenting data, for example at a local stakeholder conference, particular care should be taken to maintain the focus on places rather than people and to reveal as little information as possible about individual cases.

Any further use of the data for purposes other than the identification and management of local hotspots (e.g. for research with a view to publication) will be subject to Research Ethics Committee approval.

### 2. Data analysis

For the purposes of identifying hotspots, only those acts carried out in public locations should be included in the analysis (see above: 1c What data to collect).

### 2a Quantitative analysis

Quantitative data can be analysed using a number of different software packages. Basic frequencies and tabulations can be carried out using Excel. A statistical package such as SPSS facilitates cross-tabulation of different variables and more complex analyses. The number of deaths being analysed is likely to be relatively small, so this may not be warranted unless it can be supplemented by 'near miss' data.

Cross-tabulating locations with dates and times will identify any times of the year, month, week or day at which particular sites might be especially high-risk, and will therefore help in targeting interventions. For this purpose, locations will need to be entered in a form that permits quantification, rather than as long strings of text. The field 'Location type' is used for this.

# 2b Mapping suicides using GIS software

By far the most graphic and effective way of representing locations of suicidal acts is through the use of Geographical Information System (GIS) software. A GIS package enables any data that has a geographical or spatial element to be linked to an Ordnance Survey (OS) map and displayed visually: literally 'put on the map'. This lends itself well to the identification of suicide hotspots.

Mapping can also highlight the proximity of suicide sites to other relevant locations such as psychiatric hospitals, prisons and probation hostels, where at-risk population groups are concentrated.

Appendix 4 provides an example of mapped suicide data, showing the pattern of suicides in public locations over five years. The locations shown are based on fictitious data generated for demonstration purposes only.

There are a number of GIS packages available. Two of most commonly used are ArcGIS and MapInfo. There are no major differences between these two. The pilot was conducted using the Environmental Systems Research Institute (ESRI) ArcGIS 9 system, supported by Ordnance Survey maps provided under a pilot agreement with the NHS (England). This pilot agreement makes a wide range of Ordnance Survey data and digital mapping products available to NHS organisations in England until March 2007. Ordnance Survey has a dedicated NHS helpdesk that provides valuable information on GIS and all products available under the pilot agreement (Tel: 0845 458 0650, or e-mail: nhshelpdesk@ordnance survey.co.uk).

A single user licence for ArcGIS costs approximately £1,500. One or two days are required to install the software, import maps and create various libraries and layers of information.

Each of the major software producers offers training in the use of its packages. This can cost up to £400 a day. Local universities may run introductory GIS training sessions at reasonable cost. For example, the University of Bristol offers a one-day introduction to ArcGIS for £50 per person.

Many large public service organisations, such as county councils, police forces and public health observatories, regularly use GIS and have skilled analysts who may be able to assist in mapping suicides. University departments of geography will also be able to offer advice and practical assistance.

# MANAGING HOT SPOTS: REDUCING RISK AND OPPORTUNITY FOR SUICIDE

# 1. Agreeing local priorities: the role of a stakeholder conference

The primary purpose of a stakeholder conference is to reach agreement on where the local hotspots are and to set priorities for action.

Following a presentation of findings from the data collection and analysis phase, we recommend the use of round-table discussions and a consensus method. A modified nominal group technique (Gallagher, Hares, Spencer et al, 1993) is appropriate for this purpose and a suggested outline is provided in Appendix 5.

Consensus will need to be reached on the following questions:

- does the county/constituency have any hotspots, and if so where are they?
- which should be considered priorities for action?
   Discussions should take into account: numbers of incidents, fatality/serious injury rate and the possibilities for intervention.
- what type of measures are likely to be most appropriate and effective at each location?

The conference should culminate in the identification of key individuals with sufficient influence and skill to direct the planning around priority locations. A small core team will be assigned to each priority location with a mandate to:

- form a multi-agency alliance consisting of all key stakeholders in respect of the assigned location;
- investigate and assess the risks at the assigned location;
- assess the feasibility, acceptability, cost and likely effectiveness of different interventions, consulting all relevant local interest groups;
- develop risk-management and overall local arrangements;
- secure agreement on financial responsibility and negotiate budget where necessary.

It is recommended that a timescale is set for reporting back to the overall hotspots programme lead.

# 2. The role of project teams

Each priority location would need to be managed as a discrete project. The key tasks for each project team are outlined below.

## 2a Forming effective alliances

Additional stakeholder engagement may need to be negotiated at this stage. A key task for each group will be to secure the commitment to the project of agencies or individuals who own and manage the site/structure and to co-opt those in positions of authority. Statutory and voluntary and bodies with responsibility for suicide prevention in the area should also be represented.

Each team will need to appoint an executive sponsor, a clinical lead and a project lead. The executive sponsor will need to be a senior executive in the agency that owns the location. The clinical lead must be local to the hotspot, with access rights to local information and power to influence decision making within the health and social care community. The project lead will co-ordinate the work and liaise across agencies.

### 2b Assessing sitespecific risks

Factors to consider when assessing site-specific risks include:

- size and remoteness of area under consideration
- existing rights of access and barriers to access
- proximity to and ease of access from establishments housing high-risk populations (psychiatric in-patient units, prisons, probation hostels and hostels for the homeless)
- existing surveillance arrangements: CCTV, security patrols, likelihood of a distressed individual being spotted by existing patrols or staff working in the vicinity
- transport and communication links; ease of access for emergency services.

Discussions with staff who work on or near the location and who may have witnessed suicide attempts may supply valuable information. Further interrogation of data from coroners' records may be necessary to ascertain the detail of suicidal acts (e.g. whether one side of a bridge is more favoured for jumping than the other). Where possible, times of day, week, month or year should be studied in order to identify peak periods for suicide risk.

### 2c Considering the options

All available options should be considered. Teams will need to assess the feasibility, cost and likely effectiveness of a range of interventions, as well as their acceptability to local interest groups. Public consultation at this stage is vital. At beauty spots, nature reserves, Sites of Special Scientific Interest (SSSIs) and national parks particular care will need to be taken to limit environmental damage. The impact of any intervention both on the local environment and on the local economy will need to be widely debated.

Expert economic help may need to be sought in order to carry out cost-benefit analyses.

## 2d Drawing up local arrangements

Each site-specific risk factor should be addressed by a risk-management plan. This may consist of relatively simple and low-cost measures, such as relocating staffed points (e.g. ticket booths) to improve visibility.

The risk-management plans should be ranked in order of priority and together will form the overall action plan for the location. The overall location plan should include a timetable for implementation, together with contingency plans for noncompletion of critical phases.

Media restrictions to cover reporting of the initiative itself and any subsequent suicides at the location should be included as a matter of course.

### 2e Financial planning

The team may wish to draw up a financial plan to support the various elements of the local arrangements. Economic constraints may require the local arrangements to be phased; hence the need to prioritise riskmanagement plans (see above: 2d Drawing up local arrangements).

Financial responsibility will need to be explored and agreement reached between the 'owner' of the location and other bodies with responsibility for public health and safety. Budget will need to be negotiated within those organisations.

### 2f Implementation

Depending on the size of the overall local arrangements for the location, the project lead may take responsibility for implementation. Alternatively, if the size of project demands it, a dedicated project manager should be appointed.

The project manager should set out key events and timescales in the form of a project plan, draw down the agreed financial contributions from partner agencies and commission the work. Completion of key stages and any complications or setbacks should be reported back to the stakeholders.

### AUDIT AND EVALUATION

Responsibility for audit and evaluation will reside with the overall hotspots programme lead, to whom site-specific project teams will be accountable.

### 1. Audit

The programme lead should audit all priority locations to determine:

- a) whether the locally agreed arrangements have been implemented;
- b) whether it has been completed in accordance with the agreed timetable.

Periodic follow-up may also be necessary in order to ensure that interventions are being sustained or that agreed measures remain in place.

### 2. Evaluation

It is considered that a monitoring period of 3 years would be necessary in order to determine whether or not the measures introduced at each site have led to a reduction in numbers of suicidal acts, both at the target site and at similar sites nearby (e.g. other bridges) to determine whether suicidal individuals have simply gone elsewhere.

The contribution of each sitespecific project to the overall hotspots programme should also be evaluated through ongoing collection and interrogation of countywide data.

Because the numbers involved at any location are likely to be very small, it may be difficult to identify an effect with any certainty. It may, however, be possible, if mechanisms have been established for collecting 'near miss' data (see above: Data collection 1d: Additional sources of data), to show a reduction in rates of fatality and/or serious injury resulting from acts carried out at the site.

Even if no retrospective data are available, the agency or body that manages the location should be encouraged to record details of all future 'near misses'. These can be analysed to determine the factors that operated to prevent a fatal outcome. Survivors of 'near misses', witnesses and rescuers may be willing to be interviewed. Such interviews will generate rich qualitative data that will enable real learning to take place.

Local universities or NHS Research and Development Support Units (RDSUs) will be able to assist with evaluation.

### 3. Reporting back

The findings from each site and from the hotspots programme as a whole should be reported to the Inter-agency Forum for Self Harm & Suicide in order to share the learning with the whole suicide prevention community.

# Examples of good practice of identifying and managing suicide hotspots

South Devon Healthcare Trust has a long-standing arrangement with the local coroner's office, which routinely forwards copies of initial police reports of potential suicides to the clinical audit team. A large database, the design of which is based on the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness, has been built up over the last 15 years. The database is regularly interrogated with a view to identifying local trends and comparing these with the national picture.

This enabled 2 local hotspots to be identified. Findings were presented at the locality audit meeting and taken up with the local council and other relevant organisations. Safety measures were subsequently introduced, including fencing in of all upper levels of a prominent multi-storey car park.

For further details, contact: Clinical Audit Team Leader, South Devon Healthcare NHS Trust. Tel: 01803 655770.

The Wessex Suicide Audit, based in the University of Southampton/Royal South Hants Hospital, began in 1988 and is still regularly updated using information from coroners' files. This large database of all deaths that have been subject to an inquest is widely used as a resource by researchers, local NHS Trusts, Health Authorities and other organisations, such as the police and Samaritans.

Routine analysis revealed that car parks in the New Forest were acting as a magnet for suicidal individuals, many of whom were visitors to the area, and were being used for car exhaust poisonings. A multi-agency alliance was formed, comprising representatives of the Forestry Commission, the Samaritans, the local health authority, the district council and the university. Preventative measures were introduced, including strategic placing of signs displaying the Samaritans' telephone number. The scheme was rigorously evaluated and was shown to result in a significant and sustained reduction in the number of car park suicides occurring in the New Forest district (King & Frost, 2005).

For further details, contact: University Department of Psychiatry, Royal South Hants Hospital, Southampton. Tel: 023 8082 5537.

## REFERENCES

Amos T, Appleby L, Kiernan K (2001). Changes in rates of suicide by car exhaust asphyxiation in England and Wales. Psychol Med, 31(5): 935-9.

Beautrais AL (2001). Effectiveness of barriers at suicide jumping sites: a case study. Australian and New Zealand Journal of Psychiatry, 35:557-562.

Beautrais AL, Fergusson DM, Horwood LJ (2006). Firearms legislation and reductions in firearm-related suicide deaths in New Zealand. Australian and New Zealand Journal of Psychiatry; 40:253-259.

Berman, AL et al (1990). Suicide prevention in public places. In: AL Berman (Ed.), Suicide Prevention: Case Consultations. New York: Springer.

Cantor CH, Baume PJ (1998). Access to methods of suicide. Australian and New Zealand Journal of Psychiatry, 32(1): 8-14.

Cantor CH, Slater PJ (1995). The impact of firearm control legislation on suicide in Queensland: preliminary findings. Med J Aust, 162(11): 583-5.

Cooper PN, Milroy CM (1995). The coroner's system and under-reporting of suicide. Med Sci Law, 35(4): 319-26.

Department of Health (1999). Saving Lives: Our Healthier Nation. London: Stationery Office.

Department of Health (2002).

National Suicide Prevention

Strategy for England. London:

Department of Health.

Department of Health (2006a). Our Health, Our Care, Our Say. London: Department of Health.

Department of Health (2006b). Best practice guidance on the role of Director of Adult Social Services. London: Department of Health.

Gallagher M, Hares T, Spencer J, Bradshaw C, Webb I (1993). The Nominal Group Technique: a Research Tool for General Practice? Family Practice, 10(1): 76-81.

Glatt K M (1987). Helpline: Suicide Prevention at a Suicide Site. Suicide and Life Threatening Behavior, 17(4): 299-309.

Gunnell D, Middleton N, Frankel S (2000). Method availability and the prevention of suicide: a re-analysis of secular trends in England and Wales 1950-1975. Soc Psychiatry Psychiatr Epidemiol, 35: 437-443

Gunnell D, Nowers M (1997). Suicide by jumping. Acta Psychiatr Scand, 96:1-6.

Hawton K, Appleby L, Platt S, Foster T, Cooper J, Malmberg A, Simkin S (1998). The psychological autopsy approach to studying suicide: a review of methodological issues. Journal of Affective Disorders 50, 269-276.

Hawton K, Townsend E, Deeks J, Appleby L, Gunnell D, Bennewith O, Cooper J (2001). Effects of legislation restricting pack sizes of paracetamol and salicylate on self poisoning in the United Kingdom: before and after study. BMJ, 322: 1203-7.

Hawton K, Simkin S, Deeks J, Cooper J, Johnston A, Waters K et al (2004). UK legislation on analgesic packs: before and after study of long term effect on poisonings. BMJ, 329: 1076-1079.

Kerkhof A (2003). Railway Suicide: Who is Responsible? Crisis, 24(2): 47-48.

King E, Frost N (2005). The New Forest Suicide Prevention Initiative (NFSPI). Crisis, 26(1): 25-33.

Kreitman N (1976). The coal gas story. United Kingdom suicide rates, 1960-71. Br J Prev Soc Med, 30(2): 86-93.

Lindqvist P, Jonsson A, Eriksson A, Hedelin A, Björnstig U (2004). Are suicides by jumping off bridges preventable? An analysis of 50 cases from Sweden. Accident Analysis and Prevention, 36: 691-694.

Office for National Statistics, 2005. National Statistics Online (http://www.statistics.gov.uk/downloads/theme\_health/Dh2\_31/Table2.19.xls)

Pearson VAH (1993).
Suicide in North and West
Devon: a comparative study
using Coroner's inquest
records. Journal of Public
Health Medicine, 15(4): 320-326.

Pirkis J, Blood RW (2001).
Suicide and the Media. Part 1:
Reportage in Non-fictional
Media. Crisis, 22(4): 146-154.

Reisch T, Michel K (2005). Securing a suicide hotspot: effects of a safety net at the Bern Muenster Terrace. Suicide Life Threat Behav, 35(4):460-7.

Rosen DH (1975). Suicide Survivors: A Follow-up Study of Persons Who Survived Jumping from the Golden Gate and San Francisco-Oakland Bay Bridges. Western Journal of Medicine, 122: 289-294.

Sampson HH, Rutty GN (1999). Under-reporting of suicide in South Yorkshire (West). J Clin Forensic Med, 6(2): 72-6. Simkin S, Hawton K, Sutton L, Gunnell D, Bennewith O, Kapur N (2005). Co-proxamol and suicide: preventing the continuing toll of overdose deaths. QJM, 98(3): 159-70.

Sonneck G, Etzersdorfer E, Nagel-Kuess S (1994). Imitative suicide on the Viennese subway. Soc Sci Med, 38(3): 453-7.

Spicer RS, Miller TR (2004). Suicide acts in 8 states: Incidence and case fatality rates by demographics and method. Am J Public Health, 90: 1885-1891.

Yip P (2005). A Public Health Approach to Suicide Prevention. Hong Kong J Psychiatry, 15:29-31.

Williams C, Miller J, Watson G, Hunt N (1994). A strategy for trauma debriefing after railway suicides. Soc Sci Med, 38(3): 483-7.

### **APPENDIX 1:**

# Resources associated with programme

General administrative support: 4 hours per week @ NHS Band 3-4

Initial data collection: 2-3 weeks @ NHS Band 5

Cleaning & formatting data: 1-2 weeks @ NHS Band 5

Initial data analysis: 2-3 weeks @ NHS Band 7-8

Software (GIS)

Regular updating and interrogation of database: 5 days per 6 months @ NHS Band 7-8

Travel costs: visits to coroners and records offices

#### Stakeholder conference:

- Additional administration: 1
   week full-time either side of
   event, plus 80 hours over
   preceding 3-4 months @ NHS
   Band 3-4
- Conference venue: £1,000
- Conference catering: £720 (£12 per delegate x 60)

Programme management (overseeing, planning and audit): 1 day per week @ NHS Band 7-8

Travel costs associated with site visits

Evaluation (services of university or RDSU)

### **APPENDIX 2:**

# List of potential stakeholders and partner agencies

This list gives suggestions for agencies that may need to be involved in the local consultation process. It is not exhaustive and the key stakeholders for any local area will be influenced by its geography.

#### **HM Coroners**

#### **NHS Direct**

Mental Health Site Lead

General Practitioners with Special Interest in Mental Health

#### **Primary Care Trusts**

- Chief Executive
- Director of Public Health
- Standard Seven Lead
- Commissioner for Mental Health

## Mental Health and Learning Disability Trust

- Chief Executive
- Standard Seven Lead
- Liaison Psychiatry or Self-Harm Team
- Crisis Resolution Team
- Community Mental Health Teams
- Drug and Alcohol Team

Local Implementation Groups (LIGs) and Teams (LITs)

Children's Trust: CAMHS Self-Harm Lead

Social Services: Director of Adult Social Services

**Drug Action Teams** 

Samaritans

Mind

Other local voluntary agencies

Mental health service user and carer groups

CSIP/NIMHE Regional Development Consultants

Regional Government Office: Public Health Consultant

#### Police

- Chief Inspector or above
- Mental Health Liaison Officer
- Ambulance Service

Fire and Rescue Service

### Prison (if applicable)

- Prison Health Care Manager
- Suicide Prevention Lead

**Probation Service** 

British Transport Police: Area Coroners' Liaison Officer

#### County Council

- County Surveyor
- Highways Department

#### Town/City Council

• Car Parking Department

Parish Councils

Network Rail Area General Manager

Highways Agency Area General Manager

Bridge authorities (if applicable): Bridge Manager

Coastguard Service

**Forestry Commission** 

**National Trust** 

National Parks Authority

English Nature/Countryside Agency/Rural Development Service

Churches and faith communities

### Local Media

- Television
- Radio
- newspapers

### **APPENDIX 3:**

# List of variables to include

Coroner

Full name

Date of Birth

Date of Death

Age

**Age group:** under 25; 25-34; 35-44; 45-54; 55-64; 65-74; 75+

Sex: male; female

Ethnicity/first language (will inform decisions as to whether signs need to be provided in minority languages)

Home address (for purposes of ascertaining whether suicide took place at home)

Home postcode

Resident in county: yes; no

Verdict: suicide; open

#### Method of suicide:

- drug-related poisoning
- other poisoning including motor gas
- hanging/strangulation/ suffocation
- jumping from a high place
- jumping/lying in front of a moving object
- drowning
- cutting or stabbing
- firearms
- burning
- other

Location of act (Place name and as much narrative detail as possible to enable precise location to be pinpointed on Ordnance Survey map)

Postcode of location (This will be needed for mapping using GIS software. It can looked up and entered later, but a database field will be required)

Status of location: private; public\*

Location type: bridge; building; cliff; road; rail; rural car park or layby; other

Date of act (if clearly different from date of death)

Time of act (if ascertainable)

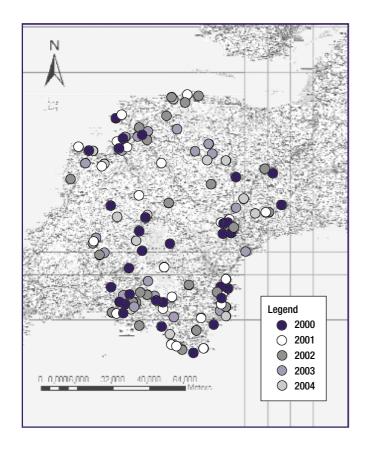
\* Suggested definitions

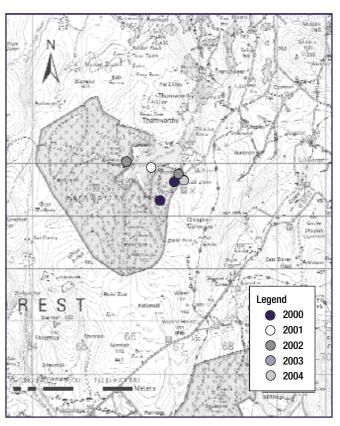
Private location: any private address, including a farmer's own land, but excluding hotels and guest houses unless the permanent residence of the deceased. Psychiatric in-patient units, prisons, hostels and care homes in which the individual was living/being cared for at time of death.

Public location: all open land not owned by the deceased individual, transport networks, public buildings, and hotels and guest houses in which the deceased was a temporary resident.

### **APPENDIX 4:**

# Example of local suicide data mapped using GIS software





N.B. The locations shown are based on fictitious data generated for demonstration purposes only.

### **APPENDIX 5:**

# Stakeholder conference:

pre-conference questionnaire and outline of consensus method for use in priority setting

# Inter-agency Forum on Self-Harm & Suicide Suicide Hotspots Conference

### Pre-conference questionnaire

We are defining a suicide hotspot as a specific, public place that is frequently used as a location for suicide and which provides either means or opportunity for suicide. An example would be a bridge from which individuals have jumped to their deaths on more than one occasion.

Are there any locations in that you regard as suicide hotspots? If so, please list them below, together with your reason for including each one (i.e. relevant personal or professional experience). Please bring the completed sheet with you to the conference.

(i)	
(ii)	
(iii)	
(iv)	
(v)	

2.00 - 2.30 Presentation of local data			
Formation of 6-8 groups, with appointed facilitators (chairpersons)			
2.30 - 2.45	Personal stories  Please introduce yourselves to each other and take a few minutes to share stories, from your own professional experience, of suicides that have occurred in public places in [county].	Total: 15 mins	
2.45 - 3.15	Does have any hotspots and, if so, where are they?  Using our data and your own local knowledge, and working as a group, please compile a list of all locations in that you consider to be hotspots.  N.B. Our maps show completed suicides only. Please think about and include locations of any serious suicide attempts or near misses.  Chairs to feed back results  Scribe to compile complete list	20 mins 10 mins Total: 30 mins	
3.15 - 3.45	Which, if any, should we prioritise?  Stage 1 (chairs take teabreak) As a group, please select your top 5 hotspots from the complete list  Stage 2 (group members take teabreak) Chairs get together to pool the groups' 'top 5s' and decide overall priorities	15 mins	
3.45 - 3.50	Overall priorities Conference chair to present the decision on overall priority sites	5 mins	
3.50 - 4.10	Risk factors and risk-management strategies For each of the final priority locations, please consider in your groups: a) what makes it attractive to suicidal individuals; b) how might site-specific risks be addressed?  Chairs to feed back	10 mins 10 mins Total: 20 mins	
4.10 - 4.30	Formation of planning groups and round-up of day	20 mins	

### **APPENDIX 6:**

### **Useful** websites

## NIMHE Primary Care Suicide Audit Tool

http://www.eastmidlands.csip. org.uk/suicide\_db/index.html

### Coroners' Society

http://www.coroner.org.uk/public/search.asp

Ordnance Survey NHS helpdesk, for help with GIS and mapping:

tel: 0845 458 0650 or e: nhshelpdesk@ordnance survey.co.uk

### Office for National Statistics (ONS)

http://www.statistics.gov.uk/

#### Samaritans

http://www.samaritans.org/

### Rail Safety and Standards Board

http://www.rssb.co.uk/

### Office of Rail Regulation. Fatalities database:

http://www.rail-reg.gov.uk/ server/show/ConWebDoc.8070

### Highways agency

http://www.highways.gov.uk/

#### Institution of Civil Engineers

http://www.ice.org.uk/home page/index.asp

### County Surveyors' Society

http://www.cssnet.org.uk/

## Press Complaints Commission Code of Practice

http://www.pcc.org.uk/cop/ practice.html

### DH INFORMATION READER BOX

Policy	Estates
HR / Workforce	Performance
Management	IM & T
Planning	Finance
Clinical	Partnership Working

Document Purpose	Best Practice Guidane	20 T	
ROCR Ref:		Gateway Ref: 7148	
Title	Guidance on action to be taken at suicide hotspots		
	National Institute for Mental Health in England		
Author			
Publication Date	10 Oct 2006		
Target Audience	PCT suicide		
	prevention leads		
Circulation List			
Description	The guidance		
	supports the		
	development of		
	effective		
	collaboration by		
	local multi-agency		
	suicide prevention		
Cross Rcf		ention Strategy for England	
	Suicide audit in Prim	ary Care Trust localities	
Superceded Docs			
Action Required	For information		
Timing	None		
Contact Details	John Scott		
	NIMHE		
	Room 8E44, Quarry I	House	
	Quarry Hill		
	Leeds LS2 7UE		
	0113 254 6892		
	john.scott@dh.gsi.go	v.uk	
For Recipients Use	,		



