Suicide prevention: is more demographic information the answer?

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ABSTRACT

Suicide is an important health issue and its prevention is prioritized in government targets. PCTs in England and Wales are also required to carry out audits of suicide deaths by the Healthcare Commission (HCC). We present findings of a 6-year analysis of suicide deaths between 2002 and 2008 in Birmingham and Solihull, the second largest urban conurbation in the UK. After extensive analysis, no demographic group was shown to have a significantly greater risk of suicide and no geographical area had significantly higher rates than another. Despite the large population examined (c.1.3 million), these findings are likely to be due to the rarity of suicides as an outcome. We discuss the practical implications of these findings for local health organizations charged with reducing suicide rates, the value to local suicide audits and the use of a new suicide audit tool developed for use by PCTs. We conclude that ever increasing collection of information surrounding suicide deaths is unlikely to result in the discovery of local groups amenable to targeted suicide prevention interventions and that the HCC may want to reconsider its performance indicator around suicide audits to allow valuable resources to be used more effectively elsewhere.

Keywords audit, Healthcare Commission standards, Primary Care Trust, suicide

Suicide is an important health issue. It is the leading cause of death among men aged 15–24 years and the second most common cause of death among people aged under 35 years.¹ It also accounts for ~400 000 years of life lost before the age of 75 and causes emotional trauma to family and friends.¹ In recognition of this, suicide reduction has been made a key government target for healthcare services.²,³

Birmingham and Solihull is the second largest urban conurbation in the UK (population c. 1.3 million). Mortality rates in 2006 from suicides and undetermined injuries are lower in Birmingham (7.35 per 100 000) and Solihull (6.24 per 100 000) than England and Wales (7.95 per 100 000). This pattern has been relatively stable for the preceding 5 years with rates for Birmingham, Solihull, England and Wales all steadily declining over time. Birmingham local authority area is the 10th most deprived area in England while Solihull is much less deprived ranked 199 of 354 local authorities.

The Healthcare Commission (HCC) requires all PCTs in England to 'develop local systems for suicide audit to learn lessons and take any necessary action [to reduce deaths from suicide]'¹¹ as part of their 2007/08 Annual Health Check assessments. The performance indicators from the HCC included establishing a suicide audit/prevention group to coordinate local suicide audits and develop local action plans or suicide prevention strategies. This group is expected to be organized by PCTs and include commissioners and public health specialists as well as other relevant stakeholders (e.g. coroner, transport police etc.)

In order to comply with the HCC performance indicators, to gain a more comprehensive understanding of the epidemiology of suicides in the city and to help guide local action, the Birmingham and Solihull Suicide Prevention Group requested we carry out an analysis of deaths due to suicide and undetermined injury for the period January 2002 to April 2008. Collection of detailed health information on victims of suicide using an audit tool developed for this purpose is seen as integral to the planning of suicide reduction strategies and is specifically mentioned in the HCC performance indicators.⁵,⁶ We used prospectively collected information to complete a new suicide audit tool for the financial year 2007/08 and routinely collected data
from the Office for National Statistic Mortality File for the period January 2002 to December 2006.

Between 2002 and 2006, 397 deaths occurred, on average 79 per year. No significant differences in mortality rates were found between the four PCTs in the Birmingham and Solihull area, socio-economic group, month of death, day of the week of death or country of origin. Neither was there a significant correlation found between deprivation in the ward of residence and suicide rates. The national trend of a male:female ratio of about 3:1 was observed.

The leading cause of suicide was hanging and self-poisoning making up 65% of all cases. Eighty per cent of deaths occurred in people aged under 55 but no single 5-year age band had significantly higher rates than another.

A geographical analysis of place of residence and place of death showed no electoral ward for which significantly elevated numbers of deaths occurred. The most common place of death was the home (49%), but this is likely to underestimate the proportion of suicide attempts occurring in the home as 25% of deaths occurred in hospital. We did identify a cluster of five suicides around a park in north Birmingham. However, we question whether five deaths over 5 years in the second largest city in the UK and in a heterogeneous environment like a large park makes this truly useful information.

After extensive analysis of this local data, we concluded that we were unable to identify any demographic group that could be easily targeted to reduce suicide rates. Men between the ages of 15 and 55 had the highest risk of suicide, but since this reflects a population of ~300,000 in Birmingham and Solihull, it makes it an unrealistically large at risk group for planning local suicide prevention strategies. All other groupings showed no significant difference from each other.

Information on deaths due to suicide throughout the 2007/08 financial year was collected using the new suicide audit tool.5,6 This tool allows the collection of substantially richer information around the circumstances of each death. After collecting data for 69 cases, we already see failure of communication between services or poor documentation being identified in almost 20% of cases. However, it is a matter of judgement as to whether these failures made a significant contribution to these deaths. The amount of information that the tool suggests is collected is large and includes coroner’s reports, significant event analyses carried out by GPs, serious untoward incidents from mental health trusts and information from GP records. While the audit tool offers the possibility of capturing data around circumstances and services in relation to suicide deaths, there is no guarantee that this will pay dividends and is extremely time intensive. Our experience is that ~20 h per week on an ongoing basis is required to fully collate and enter this information for the population of Birmingham and Solihull.

Despite pooling data for four PCTs over a 6-year period, we were unable to identify patterns in suicides that were meaningful in informing local suicide prevention interventions or strategies. It is therefore unlikely individuals PCTs or groupings of PCTs will find significant differences in suicide rates between local demographic groups, unless there is an obvious and unusual pattern present e.g. in Bridgend, South Wales, or there is a longstanding suicide hotspot that is well known to the local/regional population, e.g. Beachy Head, East Sussex. These lack of associations may be due to the relative rarity of suicides, but this work clearly demonstrates that information of this type when collected at the local level, regardless of how detailed, is unlikely to be able to provide clear answers for local policy makers in developing suicide reduction strategies.

Furthermore even where, at a national level associations have been demonstrated, e.g. between suicide and deprivation,7 our work shows that a targeted approach to the most deprived would inevitably miss the majority of people committing suicide. This would almost certainly be to such a degree that even if all potential suicides from these groups were prevented it this would not lead to PCTs achieving their target reduction in suicides. In addition, it would probably be impossible to demonstrate this improvement in specific demographic groups with any degree of statistical confidence at a local level.

The experience in Birmingham and Solihull should inform other PCTs of the limited practical value of local suicide audits. While it is legitimate to carry out an analysis of demographic information as part of gaining a local picture of suicide occurrences, our experience suggests that PCTs or Suicide Audit/Prevention Groups should not place their hopes for a solution to reducing suicide rates in this. The difficulties in translating local data robustly into meaningful strategies or interventions are great and relying on national epidemiological patterns may be the best source of information. As such there is a great need for such work at the national level. The forthcoming suicide prevention strategy in Birmingham and Solihull will make recommendations based on well-established epidemiological information from national sources where conclusions can be drawn with confidence rather than relying on the local audit that creates a great deal of uncertainty.

The Healthcare Commission may also want to reconsider its policy of requiring all PCTs to carry out an audit of
suicide deaths in order to allow resources and skills to be deployed elsewhere. An alternative to the current approach would be to change the focus of the suicide audit from the demographics of victims and their personal situations to an approach by which failures in service provision can be identified. While it is unlikely that such an approach would reduce suicide rates significantly, it could potentially be a powerful tool for improving the quality of services.

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