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Consultation, however, is provided to the worker involved with the case in an indirect way. The person seeking consultation is seeking the consultants' views and comments and is 'picking their brains' about the case. The worker can then continue to work with the patient without handing the responsibility of the case to the clinic. Prior *et al* (2003) reported positive findings when consultation was used with health visitors. They reported that supervision also had a positive impact on the referral rates, increased health visitor competence and reduced feelings of isolation and vulnerability. Stallard (1991) highlighted the potential of consultation to sort appropriate from inappropriate referrals, thus helping to foster a more relevant referral pattern.

We suspect that many of the referrers may have seen the consultation clinics as a possible way of bypassing the waiting list for child and adolescent mental health services, which was substantial at the time of undertaking this survey. Despite this we did begin to see a slow change in referral patterns with some referrers starting to seek specifically a consultation rather than direct hands-on therapy for their patients. We found this hopeful; although most referrers still sought direct involvement from child and adolescent mental health services for their patients, 12% (3 of 25) did not. We hoped that this group of referrers felt empowered after the consultations and were able to continue to help their patients on their own. Perhaps some went on to seek help from a different, more appropriate agency. We also hoped that this meant that the service was spared a workload of 12% of the referrals, which would have gone to the tier 3 service. It is too early to predict the long-term effect on referrers in regard to change in their overall skills in helping such families and also the eventual change in referral patterns to child and adolescent mental health services.

We felt retrospectively that having two different questionnaires, for GPs and for other referrers, was a weakness in the study and that in future we would use a common questionnaire for all referrers. We sent feedback of the results of this study to referrers and to professionals working in child and adolescent mental health services. We hope to encourage more of the latter to continue to offer this service to future referrers, as we perceive potential benefits for referrers, for referred children and families, and for child and adolescent mental health services who are struggling to cope with the currently escalating number of complex and challenging referrals.

Declaration of interest

None.

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Characteristics of suicides in recent contact with NHS Direct

AIMS AND METHOD
NHS Direct is increasingly used as a first source of health advice and information, receiving an average of 600 000 calls per month. We performed an audit of suicides in Hampshire and the Isle of Wight over a 2-year period to determine the characteristics of those who died by suicide and had been in recent contact with NHS Direct.

RESULTS
Of 278 suicides resident in Hampshire and the Isle of Wight, 30 (10.8%) had contacted NHS Direct in the preceding year. Of the 30 callers within the preceding year, 12 (40%) made multiple calls, 7 (23%) called within 2 weeks of death, 9 (30%) callers reported mental health problems, 17 (57%) reported physical problems, and 4 (13%) just requested information. Eighteen (60%) calls resulted in urgent medical referral, 17 to a general practitioner and 1 to accident and emergency.

CLINICAL IMPLICATIONS
The high incidence of physical, often pain-related, problems merits further investigation.

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With around 5000 people dying by suicide in England every year, suicide is a major public health issue (Department of Health, 2002). Luoma *et al* (2002) suggest that rates of contact by individuals before they died by suicide are significantly higher for primary care providers than for mental health service providers. In a systematic review of studies examining the extent to which individuals made contact with mental health and primary care providers before suicide, Luoma *et al* (2002) conclude that over half of those completing suicide had made contact with a primary care professional in the month before death, and around three-quarters had contact within 1 year of suicide.

Over recent years, the range of available primary care services in the UK has developed to include 'fast access' provision such as NHS 'walk-in' centres and NHS Direct. NHS Direct in particular is being increasingly used as a first point of contact for members of the public seeking health advice and information, with numbers of contacts averaging 500–600 000 calls a month (NHS Direct, 2005; Hansard, 2005). Calls relating to mental health form a small but significant proportion of this workload. NHS Direct operates as a telephone-based, 'first level' health screening and advice service. Clinical triage is performed by nurse advisors who use evidence-based algorithms within the NHS Clinical Assessment System to assess symptoms and provide advice, sign-posting and referral. A recent 3-month audit of the use of mental health algorithms showed that the depression screening algorithm was used 5374 times and the suicide algorithm was used 3976 times (NHS Direct unpublished data, details available from the authors on request).

This 2-year audit was designed to ascertain the proportion of suicides who had contacted NHS Direct in the year preceding their death, the reason for contact, the protocol used to assess the query and the advice given, and to compare characteristics of suicides in contact with NHS Direct with suicides in the same general population.

Method

Permission was obtained from all coroners in Hampshire and the Isle of Wight to allow NHS Direct to check names against NHS Direct databases. All persons who died by suicide (ICD–9 codes E950–959; World Health Organization, 1977) and deaths from similar causes on which an open verdict (ICD–9 E980–989, excluding E988.8) was recorded, collectively called 'suicides', were identified from coroners' records in Hampshire and the Isle of Wight. Residents whose inquest was held outside the area were identified from mortality files (2002–2003) of the Office for National Statistics. A very few inquests held in 2003 and 2004 might have been missed because they did not appear on the 2003 mortality file or occurred outside the area during 2004. Names of those dying by suicide between 1 September 2002 and 31 August 2004 inclusive, who were either residents of Hampshire or the Isle of Wight, or whose inquest was held by a coroner in this area, were checked against the records of NHS Direct Hampshire and the Isle of Wight.

Results

Characteristics of suicides

A verdict of suicide or open verdicts were returned on 278 residents of Hampshire or the Isle of Wight who died between 1 September 2002 and 31 August 2004 inclusive. Thirty (10.8%) of these residents had telephoned NHS Direct within 12 months of their death.

There was no significant difference between the 30 recent NHS Direct contacts and the other suicides with respect to the proportion of suicide (83 *v.* 71%), males (67 *v.* 75%), mean age (50 years (s.d.=19.0) *v.* 46.2 years (s.d.=17.0 years)) (Table 1), or cause of death (33% fatal overdose *v.* 27% fatal overdose). The only significant difference was in the greater proportion of Isle of Wight residents (25%) who had contacted NHS Direct compared with 8.4% of Hampshire residents dying by suicide (difference 16.6%, 95% CI 2.7–30.5, P=0.05).

The male/female ratio for all suicides from Hampshire and the Isle of Wight and for those not in recent contact with NHS Direct was 3:1, which is similar to that in England and Wales. The gender profile among recent NHS Direct contacts (male/female ratio 2:1) is roughly the reverse of the usual gender profile for NHS Direct whereby female callers constitute about six of every ten calls.

Frequency of contact

Although 18 (60%) callers had made only one call, the number of calls made by an individual ranged from 1 to 12. More males (14: 70%) than females (4: 40%) made only one call but the gender difference was not significant.

Table 1. Characteristics of suicides in contact with NHS Direct in the year before death and other suicides in Hampshire and the Isle of Wight

	Recent NHS Direct contacts (*n*=30)	Other suicides (*n*=248)
Verdict, *n* (%)		
Suicide	25 (83)	175 (71)
Open verdict	5 (17)	73 (29)
Gender, *n* (%)		
Male	20 (67)	187 (75)
Female	10 (33)	61 (25)
Age ⩾65, *n* (%)		
Males	3 (15)	24 (13)
Females	3 (30)	10 (16)
Males and females	6 (20)	34 (14)
Age, years: mean (s.d.)		
Males	47.3 (18.0)	45.6 (16.9)
Females	55.5 (20.6)	47.8 (17.4)
Males and females	50.0 (19.0)	46.2 (17.0)

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Interval between last call and date of death

The interval between the last contact with NHS Direct and death ranged from 1 to 315 days. Significantly more females (5: 50%) than males (2: 10%) had contacted NHS Direct in the 2 weeks before death (difference 40%, 95% CI 6.3−3.7, P=0.05). There was no significant difference between the proportion of calls relating to physical health among the 7 calls made within 2 weeks of death (2: 28.6%) and the 23 calls made between 2 weeks and 12 months before death (14: 60.9%, difference 32.3%, 95% CI −71.3 to 6.7) or between the proportions of the mental health-related calls in the 2 weeks before death (3: 42.9%) and between 2 weeks and 12 months before death (6: 26.1%, difference 16.8%, 95% CI −24.0 to 57.6).

Reasons for calling and screening algorithms

The 'call reason' is a brief description of the caller's presenting problem as logged by the call-handler prior to the call being passed either to a nurse advisor for clinical assessment of symptoms or – for non-symptomatic calls – to a health information advisor for provision of health information. Although mental health problems (including 3 reporting suicidal ideation) accounted for 9 of the last calls made by the 30 people dying by suicide (Table 2), physical health problems were the reason for the majority of calls (17). Pain was mentioned by 16 callers. Mental health algorithms were used in 8 of the 30 calls. However, the majority of calls appeared to be primarily about physical problems and this was reflected in the algorithms selected by the nurse advisors.

Advice given

Over half the calls resulted in a referral to general practitioner (GP) services. Eleven callers were advised to contact their GP urgently (as soon as possible or within 4 hours) and one was advised to attend an accident and emergency department as soon as possible. Over a quarter of calls resulted in the provision of health information as opposed to onward referral.

Discussion

The similarities between the NHS Direct callers and other suicides in Hampshire and the Isle of Wight suggest that the callers are a representative sample. The high incidence of physical problems, particularly problems associated with pain, relative to mental health problems in this population was unexpected and merits further investigation. Since it has been reported that suicidal intent is discussed in only 22% of last primary care consultations (Isometsa *et al*, 1995), the identification of such intent in NHS Direct contacts presents a challenge.

Table 2. Summary of reason for last call to NHS Direct and screening algorithm used

Reason for last call	Screening algorithm
Mental health problem	
Depressed/needs help	Depression
Cannot cope	Depression
Not slept for 6 days	Depression
Severe distress/threatening suicide	Suicidal ideation
Nervous breakdown?	Nil
Suicidal	Suicidal ideation
Wanting medication to calm down	Suicidal ideation – adolescent
In pain, too many painkillers	Ingestion toxic
Overdose	Ingestion toxic
Stomach pain	Abdominal pain
Abdominal pain	Abdominal pain
Gallstone pain/vomiting	Abdominal pain
Irritable bowel syndrome/increased pain with new medication	Abdominal pain
Pain on passing urine	Urinary burning (male)
Severe pain passing urine	Urinary burning (male) and urinary retention (adult)
Required dentist	Dental tooth and jaw pain
Needed emergency dentist	Nil
Opening times for Solent Dental Care	Nil
Hard and numb area on calf	Calf pain
Severe back pain	Nil[1]
Pain in ears	Nil
Hit head/cut above eye/feeling sick and shivery	Head injury
Symptoms unclear	Breathing difficulty
Confusion, muscle pain	Confusion
Shaking, joint pain	Fit
Genital pain	Nil
Request for health information	Nil
Needs Quitline number	Nil
Wanted phone number Patient Hotline	Nil
Wanted to cancel doctor's visit	Nil

1. Caller did not wish to proceed.

Conclusions

The information gleaned from this small sample of calls highlights the potential role of NHS Direct in the identification, assessment and referral of individuals who may be at risk of suicide. The preliminary findings suggest a higher than expected number of completed suicides of individuals presenting with purely physical symptoms. There is clearly scope for examining the extent to which the current NHS Direct screening process succeeds in identifying and assessing suicidal symptoms, and how it could be developed to elicit suicidal ideation which might be masked by a somatic presentation.

The NHS Direct system of routinely recording all patient contacts as part of the clinical case record provides a unique and hitherto untrodden path into the

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field of suicide research, as it offers the potential to listen to the voice of the individual at a critical time prior to death. Clearly, the length of the interval between the last call and the date of death will be a significant factor in selecting those calls which could benefit from examination. A formal analysis of such calls made within a defined time frame using qualitative research methods may provide valuable clues to the caller's mental state at the time of the call and offer the potential to develop improvements in service response to such callers.

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Declaration of interest

None.

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Evaluation of an integrated weight management and fitness programme in a high-security psychiatric setting

AIMS AND METHODS
To evaluate a new integrated weight management and fitness service for long-stay psychiatric patients who were obese or overweight with physical health risks. Body size and fitness were measured before and after each 10- to 12-week programme.

RESULTS
The number of patients referred to the programme was 145; 102 were accepted, 95 started a programme and 46 completed it. Analysis was by intention-to-treat. There were significant reductions in weight (P=0.001), body mass index (BMI, P=0.001) and waist size (P=0.001), and considerable improvements in hand strength (left hand, P=0.03; right hand, P=0.015), flexibility (P=0.022), lung function (P=0.001) and aerobic capacity (P=0.001).

CLINICAL IMPLICATIONS
An integrated programme of weight management and fitness is effective in reducing body weight and waist size, and in improving physical fitness in long-stay psychiatric patients. The long-term effect on patient's health and fitness needs to be monitored and strategies are needed to reduce patient withdrawal.

Obesity is a serious health risk which increases premature mortality and the incidence of diseases such as type 2 diabetes mellitus, cerebrovascular accidents, hypertension, coronary heart disease, arthritis and some forms of cancer. Central deposition of adipose tissue further increases health risk (Lean *et al*, 1995). Dietary modification and physical activity are key components of weight management programmes (National Institute for Health and Clinical Excellence, 2006; Swanton & Frost, 2007); physical exercise reduces the risk of weight gain, obesity, cardiovascular disease, diabetes and some forms of cancer (Department of Health, 2004).

Obesity contributes to the increased morbidity and premature mortality already known to occur in psychiatric patients (Harris & Barraclough, 1998). Side-effects of psychotropic medication, including weight gain (Gentile, 2006), may also increase physical health risks (Ray *et al*, 2001; Enger *et al*, 2004; Joukamaa *et al*, 2006).

A survey at Rampton Hospital (Cormac *et al*, 2005) found high rates of obesity, large waist size and a mean

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