Fig 1—Decrease in blood lead concentrations in groups at risk of increased lead uptake from traffic emissions and in control subjects living in areas without heavy traffic and in general population, United Kingdom, 1984-96

sure of the general population to lead from traffic emissions would have been intermediate between that of the exposed and control groups. Figure 1 shows that, since 1984-7, blood lead concentrations have fallen by a factor of 2.6-3.0 in adults and by a factor of 3.6-5.0 in children.

A wide range of measures to reduce lead were implemented in Britain throughout the 1980s—for example, lead solder was removed from tins containing food, lead in paint was controlled, and lead in petrol was reduced. All of these, together with the reduced emissions of lead by vehicles owing to the increased sales of lead free petrol since 1987,⁵ will have contributed to the substantial decline in blood lead concentrations that we observed.

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Predicting which psychiatric patients are at risk of suicide

More information needs to be taken into account

EDITOR—In the past the *BMJ* has published several articles pointing that "absence of evidence is not evidence of absence."¹ John A Dennehy and colleagues' short report on the prediction of suicide among psychiatric patients after discharge from hospital is a good example of this.² The authors conclude that, because they found no significant difference in several

variables thought to be associated with suicide between patients who had committed suicide and controls, there is no association. They then go on to state that these factors cannot be used to identify those patients who go on to commit suicide. The wide confidence intervals for the variables linked to past or present contact with psychiatric services indicate that there is considerable uncertainty about the true odds of these variables predicting suicide. For example, a duration of illness of less than five years could be over four times more common in those who kill themselves than in those who do not. Unfortunately, the chance of detecting a difference in this variable with the numbers in this study is less than 50%. Having more than one control per case would have increased the chance of detecting a significant difference.

The case for these factors not being clinically useful remains unproved. The prediction of suicide is difficult and has a high false positive rate. Traditionally, as in this study, attempts to predict which patients are at high risk of suicide have relied on the history and demographic characteristics. Perhaps a more useful approach would be to combine this with information about the nature of the difficulties faced by the patient.

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- 2 Dennehy JA, Appleby L, Thomas CS, Faragher EB. Case-control study of suicide by discharged psychiatric patients. *BMJ* 1996;312:1580. (22 June.)

Author's reply

EDITOR—Simon Hatcher makes an important general point about statistical significance, but it does not apply to our study as we did not make the statement that he attributes to us. Our conclusion that risk factors for suicide in the general population do not identify people with mental illness who go on to commit suicide was based not on the absence of significant differences between cases of suicide and controls but on the fact that the rate of some putative risk factors was virtually identical in the two groups. We drew no conclusion about the duration of illness, for the reasons that Hatcher gives.

We suspect that the difficulty in predicting suicide from risk factors is explained partly by findings such as ours and partly by the oversimplification of risk factor models. Risk of suicide may be better understood as a balance of both risk and protective factors, with suicide occurring after a sequence of key events in which risk accumulates. Our research is now directed at identifying models of cumulative risk which may be the target of preventive intervention.

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Care programme approach does not focus on need for services

EDITOR—John A Dennehy and colleagues comment on the limited value of the care programme approach in identifying the risk of suicide in psychiatric patients.¹ Similar findings were observed when documentation relating to the care programme approach was studied for all psychiatric patients from Warrington who died unexpectedly of unnatural causes and were the subject of a coroner's inquest since the implementation of the approach some four years ago.

Of the 31 patients identified, 19 were on the register for the care programme approach and had had at least one admission since the introduction of the approach. Ten of the patients had required admission to hospital in the year that the death was reported. Only nine of the 19 patients on the register had an identifiable care plan for low or medium intensity care. None of the patients had a full care programme of the type normally reserved for patients with serious mental illness and those considered to be at a distinct risk. A suicide verdict was recorded for seven patients, only three of whom had an identifiable care plan, and a verdict of misadventure or an open verdict was recorded for 12, six of whom had an identifiable care plan. Although lengthy documentation for the patients showed that some needs had been identified, there was no mention of risk of suicide or any other risk or unmet needs for any of the patients who had a care plan and an identifiable key worker.

We agree with Dennehy and colleagues that the care programme approach does not seem to detect unmet needs or risk of suicide in this vulnerable group of patients. It seems to focus on service needs and not on need for services, with an increasing emphasis on the completion of numerous forms. There is a danger that the excellent concept of the care programme approach may end up as yet another exercise in paperwork that does not work.

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- 1 Dennehy JA, Appleby L, Thomas CS, Faragher EB. Case-control study of suicide by discharged psychiatric patients. *BMJ* 1996;312:1580. (22 June.)

Mental health teams should concentrate on psychiatric patients with greatest needs

EDITOR—Valerie Murray and colleagues measured the needs for care of patients with major mental illness who were and were not in contact with their community mental health team.¹ They have usefully moved the debate on community care on from simplistic arguments about the adequacy of numbers of psychiatric beds.

The methods they used to identify patients, however, are likely to have missed a considerable proportion of people with psychotic illnesses, and their sample cannot therefore be regarded as representative. Studies have shown consistently that around one in four patients with psychosis have no contact with mental health services and are looked after entirely within general practice.² Simply asking the local practices for the names of such patients known to the general practitioners is inadequate. Even if all the practices in the Hamilton district had cooperated with the authors (which they did not), many patients with psychosis would have been missed in the absence of searches of general practice records. We have shown that identifying patients through searches of repeat prescription systems and diagnostic labels on computer is quick and identifies many more patients than the general practitioners can remember.³ Murray and colleagues' paper sheds little light on the needs, met or unmet, of patients with psychosis who are in contact only with general practitioners.

More importantly, their data offer no basis for the conclusion that expanding their community service to include all patients with psychosis would be beneficial. Many such patients may not wish to be referred back to psychiatric services. Also, patients who comply with drug treatment and whose illness is stable may not need long