Introduction

CONOR DUGGAN

Assessing risk – specifically the risk of violence from mentally ill patients to others – has always been a tendentious topic for psychiatrists and other mental health workers. I believe that this has two sources:

(a) Is there a connection between mental disorder and serious offending?

(b) Even if (a) is true, what is the evidence that mental health workers are superior to others in predicting future violence in their patient population?

The conjunction of three recent developments has again moved this area of inquiry into centre-stage. Firstly, there is the growing recognition that mental disorder has an association, albeit small, with violent behaviour, and this association exists despite controlling for other more important influences such as gender, social class and age. Mental disorder, to quote a recent review, may ". . . be a robust and significant risk factor for the occurrence of violence". Secondly, there is an expectation that health professionals should be able to assess risk and take appropriate action. The recent introduction of the Care Programme Approach (CPA) and a supervision register makes such workers responsible for the welfare not only of their patients or clients, but more broadly for the public at large, and does so in a much more stringent way than heretofore. Thirdly, there has been a sea-change in the way in which theoreticians have moved away from assessing dangerousness to assessing (and managing) risk.

Is there evidence, then, that science has something significant to tell us about the process of risk assessment for this group of patients? Given that this is at best a very inexact science, how should the civil liberties of patients be protected? Finally, how should one teach risk assessment to those entrusted by society to make evaluations? These three considerations formed the basis of a meeting in Nottingham in December 1994 from which these papers constitute the proceedings. The President of the Royal College of Psychiatrists (Dr Fiona Caldicott), who took the Chair, reminded the audience that the College believes itself to have an important role in this respect, and that a subgroup within the College has been set up for its development. While assessing dangerousness has been the province of the forensic psychiatrist, it is now clear that this is a skill which should be the concern of all mental health professionals. Thanks to the generosity of Dr John Reed and the Department of Health it has been possible to disseminate the papers presented at the meeting more widely.

The proceedings of the meeting can be logically subdivided into three sections: (a) the need for a scientific basis for risk assessment; (b) the interface of the mental health and legal professions; and (c) teaching risk assessment.

It is important to realise that assessing risk is no different from other tests that we might apply in clinical practice, so that if one matches the assessment procedure against the patient population, the resultant cross-tabulation would look like Table 1.

Sensitivity and *specificity* of the assessment are denoted respectively by the ratio of true positives/true positives+false negatives and the ratio of true negatives/true negatives +false positives. The ideal assessment is one in which there is high sensitivity (those mentally ill who are violent that are correctly identified by the assessment) and high specificity (those mentally ill who are not violent that are also correctly identified by the assessment). An assessment with low sensitivity implies that too many people are labelled as non-violent who are in fact violent (an unacceptable number of false negatives), and this is a perception perhaps of the mentally ill in the community. Conversely, an assessment that has poor specificity is unable to identify correctly those mentally ill who are non-violent (it has an unacceptable level of false positives), and this is a charge levelled against, say, the procedures for discharge from a special hospital.

While the concepts of sensitivity and specificity are widely understood, it is often forgotten that while these characteristics are constant for any one test, the usefulness of that test may vary depending upon the population in which it is used. This is summarised by the concepts of *positive* and *negative predictive values*. The positive predictive value of a test refers to the proportion of individuals identified as positive by the test who are in fact positive, and vice versa for negative predictive value. Both positive and negative predictive values vary depending upon the prevalence of the characteristic the test is designed to identify. Figures 1 and 2 illustrate this. If we try to identify ten violent individuals using a test with 90% sensitivity and 94% specificity from among 100 individuals, the positive predictive value is 64% and negative predictive value 99%. This might represent the situation in a special hospital. If we relied on the test alone, 64% of those retained in hospital because of risk of violence would actually be violent, at a cost of detaining 36% of the test positives who are not violent. Of the 86 individuals released into the community on the basis of the test results, just over 1% will be false negatives.

While this might be a reasonable basis, especially for a screening test where further interviews will be used, the same test with the same sensitivity and specificity performs much less well in a population where the

Table 1 Assessing violence in the mentally ill

	Violent mentally ill	Non-violent mentally ill
Risk assessment positive	True positive	False positive
Risk assessment negative	False negative	True negative

https://doi.org/10.1192/S0007125000298632 Published online by Cambridge University Press

violent mentally ill are less prevalent, perhaps in general practice or even in general adult psychiatry. Figure 2 shows the example where we try and identify the same ten violent mentally ill people, now dispersed within a population of 1000. Negative predictive value remains high. We might still worry about the one violent individual released on the basis of the test, but this person now represents only a fraction of 1% of those identified as safe. On the other hand, we now pay a tremendous price for identifying the remaining nine violent individuals. The positive predictive value has now fallen to 13%. Of 68 individuals identified by the test as potentially violent, the majority (59) are in fact quite safe. In order to incarcerate nine truly violent people, we incarcerate a further 59 because of the poor positive predictive value of the test in this population; further assessments will therefore be required in this context in order to reduce the unacceptably high level of false positives. Therefore, not only must we be concerned about the sensitivity and specificity of risk assessment; we must also be aware of the circumstances in which it might be applied. Something of value to the special hospitals may be worthless to the generalist.

In this supplement, **John Reed** from the Department of Health begins by reviewing some of the recent inquiries into homicidal violence by the mentally disordered, the implications of which naturally concern the Home Office, not to mention the wider public. Although isolated incidents, it is obvious that they are often the consequence of a sorry litany of neglect. While many may object to the precipitate introduction of procedures that have serious consequences for individual liberty as a reaction to some

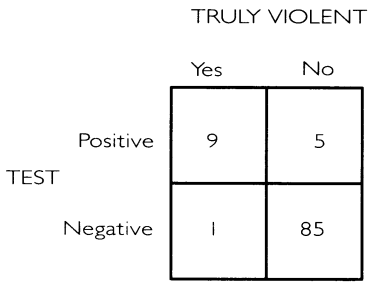

Fig. 1 Assessment with a prevalence of violence of 10%.

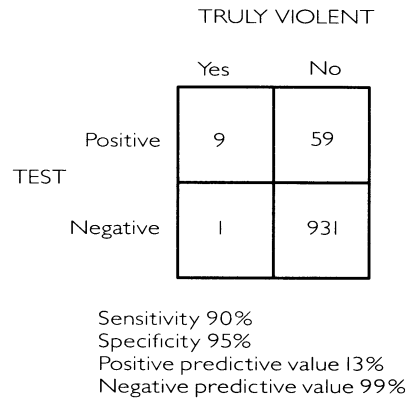

Fig. 2 Assessment with a prevalence of violence of 1%.

catastrophe, nevertheless it is clear that there is an imperative that something should be done and we need to examine it. Several inquiries have identified a lack of both knowledge and application of risk assessment attending these events, and Dr Reed reminds us that under CPA, not only is there an obligation to assess risk, but this needs to be accompanied by a risk management plan. It is also clear that risks are not static but vary with the individual's circumstances, hence there is a need to update the plan in response to events. Although Dr Reed admits that risk assessment is a difficult skill of uncertain validity, this makes the case all the stronger for explicit training in risk assessment – a leitmotif of this meeting.

Simon Wessely then contrasts the divergence between the criminological and medical views on the association of crime with mental disorder. Criminologists believe in the main that mental illness is not a significant cause of crime, the important predictors of which remain gender, previous offending, and age. However, psychiatrists' own experiences, together with sound epidemiological work such as that of Pamela Taylor in Brixton, show that those charged with homicide have a higher rate of schizophrenia compared with population base rates from the local catchment area. He then gives the results from his own study, which examined the psychiatric and criminal records of a group of those with a first-onset schizophrenia matched against a group of other psychiatric controls. There has been an increase in criminality among those with schizophrenia over the past 30 years, but this has merely paralleled the general increase in crime in society. The strongest predictors of criminal behaviour in individuals with schizophrenia were gender, ethnicity, previous offending, and age at onset. Having schizophrenia is a predictor of criminality in a logistic regression equation after these variables, but only just (i.e. it makes a small contribution). Being convicted of violent offending was significantly more common in the schizophrenic group compared with the control population of other mental disorders. However, the magnitude of this increase has to be kept in context. Dr Wessely illustrates this by using the notion of attributable risk and data from the ECA study, by arguing that if one could get rid of schizophrenia, this would only decrease the rate of violent crime by 3%.

If schizophrenia is associated with violent offending, then the evidence that psychiatrists are useful in its prediction, reviewed by **Alex Buchanan**, is thin indeed. There are, however, serious methodological problems associated with these earlier studies, not least of which was that they were rarely concerned with the phenomenology of the disorder. He reports on a study from the Institute of Psychiatry which showed (a) that psychotic individuals frequently act on their delusions and (b) they were more likely to act on their delusions if they found evidence in support of the delusion or if the delusion was affectively charged. Although these are useful results, Dr Buchanan is cautious about their practical utility.

The issue of taking phenomenology seriously is also the content of the paper by **Don Grubin**, which focuses on sexual offenders. It is commonly held that a high rate of recidivism makes this a particularly problematical group. However, Dr Grubin presents statistics that challenge this general assumption. He highlights the difficulty in identifying those who go on to commit further sexual offences from their past history, by pointing out that most individuals with a past history of sex offending do not go on to commit further sex offences, but that many future sex offences come from those *without* a previous sex offence (again the problem of sensitivity and specificity). He shows that despite the elegance of actuarial predictions, these have limited predictive value and are of little clinical use. Conversely, depending upon phenomenological descriptions is also problematical, not least because they lack empirical support. He then begins to develop a model for the sadistic sexual offender, in which he claims that the crucial factor is that there is a deficiency of empathy indicated by social or

https://doi.org/10.1192/S0007125000298632 Published online by Cambridge University Press

emotional isolation. This in turn has two components: (a) an ability to understand the other; and (b) providing an appropriate response. Sadistic offenders come from the group who lack empathy.

Margaret Oates reminds us of the important observation that those most at risk from the mentally ill are other family members, especially children. For instance, 25% of all homicides involve a child. The chain of causality is complex, however, with the mental illness acting indirectly in contributing to the poor outcome. Thus, a woman with schizophrenia may be likely to marry a man with another mental disorder, be unsupported during the pregnancy, be in poor social circumstances, and so on. Such a woman, when ill, may then not protect her child against an abusing father, and hence the connection between the mental disorder and the harm to the child may be indirect. She makes the important point that acute psychotic conditions, if managed and treated appropriately, frequently do not have an adverse outcome for the child; it is the cumulative effect of longstanding chronic conditions that has a greater impact on the emotional development of the child. Finally, she highlights the importance of inquiry of the health of children as part of the adult psychiatric assessment, as there is a legal obligation to do so – a point which will surely come as a surprise to many adult psychiatrists in practice.

One of the interesting dynamics is that between the two professions of medicine and the law – the latter being particularly concerned with those mentally ill who are wrongly considered to be dangerous when they are not. **William Bingley** takes up the issue of what patients are entitled to when their dangerousness is being assessed. Given that this is an inexact science, what is the patient entitled to so as to ensure that his/her interests are protected? He discusses the ethical issues raised when one relies solely on an actuarial approach to establish that an individual is at low risk, or in proving the contrary if he/she scores on the crucial variables, as the latter are relatively immutable. Thus risk assessment needs to be explicit and fluid, subject to constant re-evaluation and critical self-scrutiny, if it is to do justice to the complex judgement at hand.

Paul Bacon continues this defence of the rights of the mentally disordered, highlighting various cases where the law has been recently amended to the patient's disadvantage. He raises three questions relevant to this debate to highlight a number of uncomfortable anomalies. Firstly, are we being overcautious about assessing risk? Specifically he highlights the difficulties faced by a patient in establishing that he/she is no longer dangerous while in a secure setting. Secondly, there is the difference in the risk assessment between those who go through the penal and therapeutic systems. For instance, an individual who gets a fixed custodial sentence, and having served part of this, is then at liberty without anyone having an obligation to assess his future risk. This is in contrast to a psychopath who, having been deemed treatable, is thereby given an indeterminate sentence and whose future risk we are obliged to evaluate. Thirdly, he raises for debate the question as to whether it is fair on the clinician to make a recommendation for release on his/her own for unrestricted patients, suggesting that it would be to everyone's advantage (the clinician included) if this were to become a corporate responsibility.

Peter Snowden presents a useful paper as a practising forensic psychiatrist, and demythologises the special place of the forensic psychiatrist in predicting future criminal behaviour. He makes a distinction between risk management and gambling, the latter being a situation where there is more than one outcome and where the risks have not been assessed. Risk management requires information, ideally from several different sources. He separates risk identification from risk assessment and risk management. With regard to training, Dr Snowden believes that apprenticeship is important, as well as the development of a longitudinal perspective and true multidisciplinary working. The main thrust is to make the whole process of risk assessment more explicit, rigorous and testable.

Mike Harris sits on the College committee on the training of risk assessment. He makes the important point that assessing risk is at the heart of any clinical endeavour; what is new is a more formalised approach to the assessment. Here the role of the clinical teacher is important. Since much of clinical medicine is taught through the apprenticeship method, this will continue. However, it has deficiencies, particularly in that the rules are rarely made explicit to the apprentice, and mistakes may be perpetuated. He argues strongly that a conference, such as the one in which he is making this address, is not the most effective means of changing the way in which practitioners operate! Small group seminar teaching, where the rules whereby the decisions on assessing risk are made explicit, should be part of continuing professional development. What would seem to be most effective is continual working and reworking of the decision-making process, particularly bringing in less experienced staff so that they become familiar with the process and develop their confidence and expertise. It is interesting that the College has taken this sufficiently seriously to set up a group to develop guidelines in risk management.

Glynn Harrison, in the final paper, gazes into his crystal ball and sees some worrying consequences for our practice from current legislation. He argues that the implementation of CPA in community care will be the yardstick whereby an individual's practice will be judged. There are special hazards attached to supervision in the community, a supervision that is not time-limited and with a duty of care extending perhaps to the entire community. There is also the importance of advocacy groups who are likely to be critical of the adequacy of psychiatric provision. He believes that the downside of these influences is that psychiatrists and other mental health workers will be forced into defensive practices, and the recent freedoms of psychiatric patients will be lost. He warns that the old bricks and mortar institutionalisation may be replaced by institutionalised walls of paper, and that a balance needs to be struck between competing interests. How this, and the other conflicts highlighted in this supplement, will be resolved is a matter for the future.

CONOR DUGGAN, MRCPsych, Mapperley Hospital, Porchester Road, Nottingham NG3 6AA

ACKNOWLEDGEMENT

The author would like to thank Peter Jones for his example on the importance of the context when evaluating an assessment procedure.