As Kelly points out, when it comes to persons with a ‘mental illness’ (or a ‘psychosocial disability’ in the language of the Convention) there are major challenges. Although there will be debate about who has a ‘disability’, the majority of those with a mental illness likely to be severe enough to be candidates for involuntary treatment are almost certainly included. Thus a ‘disability-neutral’ mental health law becomes necessary. The Mental Health Act 1983 (amended in 2007) does not comply with the terms of the Convention. It fails the test proposed by the UN High Commissioner for Human Rights by having as a necessary criterion the presence of a ‘mental disorder’ (i.e. a disability). Thus it is taken to violate Article 14, that ‘the existence of a disability criterion the presence of a “mental disorder” (i.e. a disability). Thus in Northern Ireland the criteria for detention also include a mental disorder criterion which may be considered a disability ‘however caused or manifested’. As mental disorder ‘however caused or manifested’. As mental disorder 'however caused or manifested'. As mental disorder criterion which is defined in Section 328 of the Act as a significant impairment of decision-making capability. A ‘tick-box’, ‘objective’ or procedural approach will not be adequate to the task. Some form of ‘interpretation’ will be required, but this can be tested by consulting others who know the person’s values well, with recourse to a tribunal in the face of disagreements.


The editorial by Kelly¹ was thought-provoking for two reasons: the implication that the United Nations Convention on the Rights of Persons with Disabilities might prevent the detention and treatment of patients who are ill, and that there was a ‘UK’ Mental Health Act 1983 modified in 2007.

Fortunately, I had not missed a major legislative change. It remains the case that in Scotland the Mental Health (Care and Treatment) (Scotland) Act 2003 is the legislation under which care is given to those with mental disorder. The Mental Health (Northern Ireland) Order 1986 also remains. Thus there is no ‘UK’ mental health legislation. This may appear parochial but it is critically important when considering care and treatment in these legislative areas of the UK. As Kelly does not address the criteria for detention in Scotland or Northern Ireland, his attempt to raise the relevance of the UN Convention to UK mental health legislation is undermined: these criteria are considered here.

In Scotland there are broadly five criteria for civil detention: mental disorder; significant impairment of decision-making ability about medical treatment for mental disorder; a significant risk to the health, safety or welfare of the patient or the safety of any other person; it is necessary to detain the patient in hospital and medical treatment is available. There is thus a specific ‘mental disorder’ criterion which is defined in Section 328 of the Act as any: mental illness, personality disorder or learning (intellectual) disability ‘however caused or manifested’. As mental disorder is a criterion, the UN Convention may require the Scottish Government to remove it in order to be compliant in the same manner as the UK Government would be required to do so for the legislation critiqued by Kelly.

Similarly in Northern Ireland the criteria for detention, although varying with different ‘forms’, include mental disorder of a nature or degree which warrants detention of the patient in hospital and when failure to detain would create a substantial likelihood of serious physical harm to the patient or to other persons. Thus in Northern Ireland the criteria for detention also include a mental disorder criterion which may be considered a disability under the UN Convention.

In view of the argument that neither of these acts comply with the definition of disability in Article 1 of the UN Convention, could this be used as grounds to challenge detention? At present, have decision-making capability (was able to express his preferences) would provide good evidence of what they would be.

Obviously there will be difficult cases. A ‘tick-box’, ‘objective’ or procedural approach will not be adequate to the task. Some form of ‘interpretation’ will be required, but this can be tested by consulting others who know the person’s values well, with recourse to a tribunal in the face of disagreements.

The UN Convention on the Rights of Persons with Disabilities and UK mental health legislation


As Kelly points out, when it comes to persons with a ‘mental illness’ (or a ‘psychosocial disability’ in the language of the Convention) there are major challenges. Although there will be debate about who has a ‘disability’, the majority of those with a mental illness likely to be severe enough to be candidates for involuntary treatment are almost certainly included. Thus a ‘disability-neutral’ mental health law becomes necessary. The Mental Health Act 1983 (amended in 2007) does not comply with the terms of the Convention. It fails the test proposed by the UN High Commissioner for Human Rights by having as a necessary criterion the presence of a ‘mental disorder’ (i.e. a disability). Thus it is taken to violate Article 14, that ‘the existence of a disability shall in no case justify a deprivation of liberty’.

With colleagues, I have argued that mental health law fails to respect the ‘autonomy’ or right to ‘self-determination’ of the patient in psychiatry in the same way as capacity-based law does for all other patients.²,³ Mental health law is thus discriminatory. This discrimination seems to be based on deeply embedded (but clearly false) and persistent stereotypes of mental illness being inextricably linked with incompetence (and dangerousness).

To eliminate the discrimination there must be a generic law covering all persons who lack decision-making capability, whatever its cause (whether it be a psychiatric, medical, surgical or other cause, e.g. a head injury, schizophrenia, dementia, stroke, post-operative confusion) and whatever the setting. The criteria for involuntary treatment under our ‘fusion law’ proposal do not require a diagnosis of a ‘disability’. They are based squarely on an impairment of ‘decision-making capability’ (whether the person has a pre-existing disability or not) and the treatment must be in the person’s ‘best interests’. Both criteria are controversial and require elaboration. The concept of ‘will and preferences’, used frequently in the CRPD, could be helpful. ‘Involuntary’ (if that remains the right term) interventions could be justified when a person is unable to express their will and preferences or when their currently expressed will and preferences are not their ‘enduring’ or ‘authentic’ will and preferences (as might occur during a confusional state). The appropriate ‘best interests’ intervention in such cases would be to give expression to what has been determined to be the person’s ‘authentic’ will and preferences. An advance statement made when the patient did
the Convention is not legally binding on UK domestic legislation but places obligations on the government to ensure its laws are compliant. Complaints can be made to the UN commissioner where people with a disability feel that the Convention is not being appropriately implemented. It was not possible to determine whether any complaints had been received as a result of this definition.

In conclusion, the UK, in the sense of all three legislative areas, may receive a similar criticism to Spain from the UN Committee on the Rights of Persons with Disabilities when it reports, but it remains to be seen whether this will lead to widespread change in mental health legislation.


Author’s reply: I agree with Szmukler that the ‘fusion law’ proposal would help shift detention criteria from the presence of mental disorder to the absence of decision-making capacity, and that a revised version of ‘best interests’ would be useful. In this context, it is interesting that the expert committee charged with advising the government on revising the Mental Health Act 1983 found that only a ‘small minority’ believed that ‘a mental health act should authorise treatment in the absence of consent’ and ‘if a person with a mental health act should authorise treatment in the absence of consent’.


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The significance of copy number variations in schizophrenia

Rees et al.2 seek to replicate the association with schizophrenia of copy number variants (CNVs) involving putative schizophrenia loci in a large case–control study. They conclude that 11 of the 15 previously implicated loci were strongly associated with schizophrenia. The odds ratios of these CNVs relative to schizophrenia range between around 2 and > 50. The authors suggest that the findings now indicate a need for routine screening for CNVs.

However, I think there are grounds for reservations about the implication of these findings for the generality of cases of schizophrenia, both at the population level and in terms of public health initiatives. The authors report that one or more of the identified CNVs was present in 2.5% of the case group and in 0.9% of the control group. Let us assume that the prevalence of schizophrenia in the general population is around 0.5%, as reported in the British National Psychiatric Morbidity Surveys.3-4 From this it is possible to calculate that, for every one person with schizophrenia who has one of these CNVs, there would be around 72 in the unaffected population. The positive predictive value (PPV) is the proportion of positive results of a test that are truly positive, and the PPV equivalent to these data can be calculated at 1.37%: in other words, this is the probability that someone with one of the identified CNVs has schizophrenia. If we change the assumed prevalence of schizophrenia to 1%, the PPV rises to 2.73%. The authors say: ‘[g]iven their frequency, these findings therefore suggest that routine screening for CNVs should be made available and that the results will have immediate implications for genetic counselling, and given their comorbidity with other medical disorders, for patient management as well’. However, in my view, these values for PPVs make this conclusion questionable.

It is also of interest to use the authors’ data to calculate the population attributable fraction (PAF): this is the notional amount by which the prevalence of an outcome would be reduced if the particular exposure were completely removed from the population. It reflects both the frequency of the given exposure and the strength of its effect. Using these data and, as before, assuming a prevalence of 0.5%, the PAF is 0.618%. If we assume a prevalence of schizophrenia of 1%, this index changes very little, to 0.622%. This is not a large value: we found a PAF of 14% for the link between psychosis and non-consensual sexual intercourse before the age of 16,5 whereas a meta-analysis by Varese et al.6 suggests that the PAF for all forms of childhood adversity in schizophrenia is 33%.

The practical implications of CNVs in schizophrenia are thus in some doubt.

Authors’ reply: We thank Professor Bebbington for his comments and for giving us the opportunity to clarify our recommendations relating to copy number variant (CNV) testing in those with schizophrenia. We would like to make it clear that we were not suggesting universal screening of CNVs in healthy populations. Rather, we were suggesting that it is time to consider testing for CNVs in those with a diagnosis of schizophrenia. On reflection, we should have used the term ‘genetic testing’ rather than ‘screening’, and apologise for this ambiguity. In this sense the positive predictive value of CNVs for schizophrenia is irrelevant as the patient already has the disorder.

We believe that testing for pathogenic CNVs in schizophrenia should be considered for a number of reasons, but emphasise that this should only be undertaken with clear informed consent and in the context of professional genetic counselling. Among the potential benefits of knowing the carrier status of patients, physical health and informing patients about potential risks to family/offspring are the two areas that stand out.

Therefore, if we diagnose a patient with schizophrenia as a carrier of a pathogenic CNV, even though this will apply to only 2–3% of our patients, it could have important implications for their management. The identified CNVs can have an adverse impact on patients’ health given that these CNVs are associated with obesity, epilepsy and cardiovascular disorders. This information could be crucial in guiding targeted monitoring and intervention, particularly given the increasing recognition of the effects of poor physical health and decreased life expectancy in schizophrenia. These factors may also be important considerations in the selection of the most appropriate medication.

Further, although the frequency of the implicated CNVs is low in schizophrenia, each of the 11 implicated CNVs can lead to a range of other disorders such as developmental delay, intellectual deficit, autism spectrum disorders, and a number of congenital anomalies. We have estimated that carriers of these CNVs are associated with obesity, epilepsy and cardiovascular disorders. This information could be crucial in guiding targeted monitoring and intervention, particularly given the increasing recognition of the effects of poor physical health and decreased life expectancy in schizophrenia. These factors may also be important considerations in the selection of the most appropriate medication.

The recent meta-analysis by Singh et al. examined the proportion of violent people among those classified as high risk, known as the positive predictive value (PPV). They found that PPV is highly variable between studies and is most strongly associated with the base rate of violence in the whole risk-assessed group. They conclude that risk assessment is not a reliable indicator of absolute risk. We agree. The increased focus on the PPV of high-risk categories is a welcome development because it leads to a consideration of the number of people who might need to be assessed as high-risk for every true positive (actually violent) person. The number needed to assess is often a more relevant measure than those derived from the receiver operator curve and it clearly illustrates the lack of meaning in recent debates about the extent to which group data apply to individuals and the margins of error in particular risk predictions. However, we believe that the debate about risk assessment now needs to move beyond abstract notions relating solely to probability. A probability after all is simply a number between 0 and 1, a number that is beyond abstract notions relating solely to probability. A probability after all is simply a number between 0 and 1, a number that is uninformative unless it is a probability of something specific.

Although not cited in Singh et al, we systematically examined PPV of risk categorisation after making generous assumptions about the statistical power of risk assessment. Unlike Singh et al, our paper focused on the main factor that actually determines base rates and thus PPV – the definition of violence according to violence severity. For example, using a risk assessment instrument with a sensitivity and specificity of 80% for the detection of different outcomes, the PPV for criminally violent behaviour over a year by people with schizophrenia might be about 4% under optimal conditions, whereas the same figure for homicide would be 0.04%.

In the primary risk research, including that used by Singh et al, a wide spectrum of violent events is amalgamated into an omnibus ‘violent’ category. These events range from common assault all the way to homicide. Each of these diverse events has different base rates and consequences, with more severe violence having lower base rate but leading to greater losses.

Risk assessment in mental health should start to consider the dimension of resulting loss. In areas outside mental health, risk is not a probability but is a quantum of loss – that is why we pay our insurance premium in money, yet have little idea of the likelihood of the loss of our possessions. In our view any study that does not consider the magnitude of resulting loss should not really be thought of as a ‘risk assessment’ and more properly should be referred to as ‘probability assessment’. Although quantification of loss poses significant challenges, considering a definition of risk that includes the loss component re-emphasises two complex, important and unanswered questions. First, what actual psychiatric interventions in terms of cost/side-effects/benefits are indicated for those who are regarded as high risk, and yet should be withheld from patients classified as low risk? If the harm we consider is not severe, no costly, restrictive or intrusive treatment can be justified. If the harm considered is severe, it will also be rare. Therefore, what costly and intrusive intervention can be justified for the tiny proportion of false positives, or if the intervention is not costly or intrusive, why withhold it from...
low-risk patients, who will commit many of the future acts of violence? Second, is there evidence that an overall reduction in violence can be achieved by applying this cost-effective and acceptable intervention to a group who are more likely to offend while denying it to those who as a group are less likely to offend? Will the additional resources spent on preventing violence by high-risk patients be justified in terms of harm reduction? 

At the end of the recent paper, Singh et al recommend that risk assessments be provided with a qualification explaining their limitations. Here we agree as well. Perhaps it should be ‘this risk assessment provides an estimate of an uncertain probability of an unspecified event with no consideration of the consequences’.

Authors’ reply: We thank Large & Singh for their comments. But we would point out that we did not examine positive predictive value, as they say we did. We described the proportion of those classified as high risk who then acted violently. The two are only the same if an ascription of high risk, whether made using a structured risk assessment instrument (SRAI) or arrived at through clinical judgement, is treated as a ‘prediction’. Studies of the predictive validity of risk instruments out of necessity handle the data in this way and usually conclude that SRAIs demonstrate a moderate level of accuracy. As those who design SRAIs and others have repeatedly pointed out, however, fallible predictions are of limited value to clinicians. One thing that should help those clinicians is knowing what a classification of high risk means and, in particular, whether it means the same thing in different settings. We found that after controlling for time at risk, the rate of violence in groups classified as high risk using SRAIs shows substantial variation.


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