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Ottawa ankle rules for the injured ankle

Useful clinical rules save on radiographs and need to be used widely

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What could possibly be more straightforward than the assessment of an injured ankle? Patients with ankle injuries, usually sustained recreationally or in a simple fall, attend emergency departments throughout the world in their hundreds of thousands every year. Most of these patients will have sustained simple injury to ligamentous soft tissue or a small avulsion fracture of no clinical significance. A minority will have sustained more serious fractures, requiring immobilisation or internal fixation. Patients with ankle injury constitute approximately 5% of all patients who visit emergency departments, although fewer than 15% of these patients will have clinically significant fractures.

Differentiating between these two groups of patients is not always easy, particularly for relatively inexperienced clinicians. The safety net for indeterminate examination has always been recourse to radiography. However, such an unselective policy has resulted in inestimable numbers of unnecessary exposures to radiation for little diagnostic yield. In addition to being poor medicine, such profligacy is a luxury that is no longer acceptable in any health system.

Faced with such inconsistent assessment and use of radiology, Stiell and colleagues developed the concept of a clinical decision rule to guide the assessment of ankle injuries—in particular, to determine the indications for radiography.[1] Their objective was to produce reliable and reproducible guidance based on objective criteria and thus reduce the subjective component of assessment. The validation of this rule involved thousands of patients in a structured programme to generate rigorous rules with exceptional performance as a diagnostic test. This became known as the Ottawa ankle rules, using bony tenderness and inability to bear weight as positive indicators for radiography (p 418).

During the subsequent decade, successive papers have reproduced Stiell's findings and established the Ottawa ankle rules as a safe, cost effective, and reliable approach to assessing injured ankles with impressive consistency when applied by senior emergency doctors, junior doctors in training, and nurse practitioners.[2 3]

The applicability of the Ottawa ankle rules in children aged 2-16 years has been confirmed with 100% sensitivity for significant fractures of the ankle and mid-foot. This would allow a reduction in radiographs of the ankle of 16% and of the foot by 29%, without missing any clinically significant fracture.[4 5]

In this issue, Bachmann et al report a systematic review of 27 studies evaluating the implementation of the Ottawa ankle rules[6] (p 417). A sensitivity of almost 100% was confirmed, with a possible overall reduction in the number of radiographs performed of 30-40%.

Despite these impressive figures, the use of the Ottawa ankle rules remains variable, with far more common use reported by clinicians in Canada and the United Kingdom compared with the United States, France, and Spain.[7] Critics of the decision rule concept cite loss of clinical autonomy and reluctance to practise within rigid guidance. However, such resistance is difficult to support given the large amount of evidence in favour of the Ottawa ankle rules.

Of course, the value of a normal *x* ray film in providing reassurance for patient and clinician should not be underestimated. However, the Ottawa ankle rules provide a high level of diagnostic confidence in the absence of radiographs when considering treatment options and recommendations for return to activity.

Applying the principle behind clinical decision rules to other conditions seen in emergency departments in high numbers, with variable clinical assessment and a tendency to order radiographs indiscriminately, has been a logical next step. The characteristic of all these rules is high sensitivity, allowing clinicians to be selective in the use of radiography. The Ottawa knee rule, for example, resulted in a reduction of 26.4% of patients referred for radiography of the knee.[8] The Canada cervical spine rule for radiography in alert and stable patients with trauma showed 100% sensitivity for identifying clinically important injuries to the cervical spine.[9] Similarly, the Canada computed tomography head rule for patients with minor head injury defined high and medium risk factors for clinically important brain injury and thus identified the population for whom computed tomography was indicated.[10] The cervical spine and head rules have been generated but not yet fully tested and validated.

These rules are transforming the approach to the assessment of these injuries and, after training, can be used by clinicians from a range of backgrounds (including medical, nursing, and paramedic staff), in both hospital and community settings.

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Should psychiatrists protect the public?

A new risk reduction strategy, supporting criminal justice, could be effective

As conservative members of the middle classes, most psychiatrists probably support recent criminal legislation designed to improve public protection by introducing tighter controls on high risk offenders. Psychiatrists have always contributed to public protection by detaining dangerous patients. Yet proposed mental health legislation emphasising public protection has provoked an outcry.[1] The government is accused of circumventing human rights legislation by concealing preventive detention in medical disguise, with establishment figures in forensic psychiatry even urging withdrawal from psychiatry's already limited participation in public protection.[2–4] The Royal College of Psychiatrists has stated unequivocally that the only rationale for psychiatric intervention is for the benefit of patients' health and public protection is secondary.[5] The rhetoric should now cool while psychiatry determines its role in an alternative public protection framework.

The debate's moral focus has largely neglected two pragmatic questions. Firstly, is the health service equipped to take the lead in public protection? Secondly, can the philosophy underpinning strategy of the Department of Health for mental health be reconciled to the public protection agenda of the Home Office?

Many concerns derive from lack of clear limits on doctors' powers and responsibilities at a time of increasing accountability and choice for consumers. The proposed Mental Health Act minimises many previous restrictions on detention.[1] Diagnosis and treatability will not be barriers. Tribunals will ratify compulsory treatments, thereby balancing patients' rights but redoubling bureaucracy. Psychiatrists will still be the gatekeepers to underresourced services. Secure services for mentally ill offenders remain inadequate and inequitable, overreliant on private beds, with delays of movement in and out of high security units and unacceptable levels of psychotic illness among prisoners. Moreover, while the Department of Health's strategy clings to the euphemism of "personality disorder," psychopathy is the prime target and no one is fooled into thinking otherwise. As this condition is intertwined with recidivist criminality, any health led strategy implies medicalisation of offending with no clear boundary between criminal justice and health services.

The root problem remains a clash of philosophies. Proposals for "dangerous and severe personality disorder"[6] were initially a joint departmental effort. But the Home Office dominated subsequent developments whereas the Department of Health's priority remained the shift of treatment from the hospital to the community. Instead of fast tracking new, secure facilities, recruiting staff, and training them in risk management, reorganisation, and reaffirmation of the policy of community care remained central, with added choice and autonomy for service "users."[7 8] Specialist teams delivering care according to a model developed in north Birmingham guided policy, irrespective of criticisms that the model is deficient in risk assessment and both public safety and patient safety.[9] Psychiatrists are confused by mixed messages: on the one hand they must reduce outmoded reliance on inpatient beds and listen more to patients' demands; on the other, they must identify dangerous patients and detain them, indefinitely if necessary.

We need a new and coherent strategy for high risk individuals led by the criminal justice system, with psychiatry in a secondary, supporting role. Scotland has already developed a variant of this proposal.[10] Psychopathic individuals should be imprisoned when their offences warrant it, with discretionary life sentences to address persistent risk. The problem is that judges currently use these sentences in less than 2% of eligible cases. Psychiatrists could substantially improve the advice on risk that they currently offer. But they cannot take over the courts' role of selective incapacitation of high risk offenders.

After sentencing, prison psychologists already deliver cognitive behavioural programmes to individuals posing a high risk. If the policy of the Department of Health is truly to raise the health care of prisoners to NHS equivalence, these programmes should be enhanced and secure hospitals should deliver more intensive specialised treatments. But flexibility of movement from one system to another, according to clinical need and available expertise, must be built into new legislation and working practices.

In the community, specialist forensic psychiatry services should expand to support police and probation services, which are better equipped to operate surveillance and supervision, and to set limits. For example, the Challenge project, based in a probation

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