particularly on children and adolescents. These include the risk of video game addiction,^{8,9} (although the prevalence of true addiction, rather than excessive use, is very low⁸) and increased aggressiveness.¹⁰ There have been numerous case reports of other adverse medical and psychosocial effects. For instance, the risk of epileptic seizures while playing video games in photosensitive individuals with epilepsy is well established.^{11,12} Graf et al report that seizures are most likely to occur during rapid scene changes and when games include patterns of highly intense repetition and flickering.¹² Seizures and excessive or addictive play do not seem to be linked directly, however, as occasional players seem to be just as susceptible.

Other case studies have reported adverse effects of playing video games, including auditory hallucinations,^{w13} enuresis,^{w14} encopresis,^{w15} wrist pain,^{w16} neck pain,^{w17} elbow pain,^{w18} tenosynovitis,^{w19-w22} hand-arm vibration syndrome,^{w23} repetitive strain injuries,^{w24} peripheral neuropathy,^{w25} and obesity.^{w26-w28} Some of these adverse effects seem to be rare and many resolve when the patients no longer play the games. Furthermore, case reports and case series cannot provide firm evidence of cause and effect or rule out other confounding factors.

On balance, given that video game playing is highly prevalent among children and adolescents in industrialised countries, there is little evidence that moderate frequency of play has serious acute adverse effects from moderate play. Adverse effects, when they occur, tend to be relatively minor and temporary, resolving spontaneously with decreased frequency of play. More evidence is needed on excessive play and on defining

what constitutes excess in the first place. There should also be long term studies of the course of video game addiction.

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Secondary prevention of falls and osteoporotic fractures in older people

A comprehensive integrated service is still some way off in the UK

Falls and osteoporotic fractures are a major public health challenge for countries with ageing populations. In the United Kingdom, approximately 30% of people over 65 years and 50% over 80 years will fall in a given year.¹ In addition to the morbidity and mortality associated with the injuries they cause, falls are a principal reason for emergency attendance at hospital, hospital bed utilisation, and transfer to nursing home care.

Systematic underestimation of the problem results from the lack of an ICD (international classification of diseases) diagnostic code for falls in older people (which are classified instead as "senility") and the tunnel vision of health staff who fail to list falls as the underlying reason for presenting injury. Approximately 200 000 osteoporotic fractures occur each year in Britain, with most fractures of the hip and radius caused by falls.² Because of this strong association, the consensus view is that falls, osteoporosis, and fractures must be managed together. In practice, however, this is rarely the case.

This is frustrating, given the impressive evidence base for the effectiveness of the secondary prevention of falls and osteoporotic fractures in older people.³⁻⁵ This has been acknowledged in recent clinical guidelines from the UK National Institute for Health and Clinical Excellence (NICE) on the prevention of falls (see box 1 on bmj.com) and on the secondary prevention of osteoporotic fractures in postmenopausal women (see box 2 on bmj.com).^{6,7} Moreover, the national service framework for older people in England stipulates that "by 2005 all localities will have a comprehensive, integrated service for the prevention of falls and fractures."⁸

NICE recommended in its guidelines on falls that people need further investigation if they have two or more falls in one year, have an injury after a fall, or fall and also have gait instability. Such investigation could identify modifiable risk factors leading to tailored

interventions such as medication review, individually prescribed exercise, and the treatment of contributory medical problems. NICE also states that “local health and social communities should review their existing practice against this guideline” and “consider the resources necessary.”

The NICE guidelines on secondary prevention of osteoporotic fracture include good economic data and cost effectiveness modelling on investigations, drugs, and managing fractures. This modelling favours drug treatment for bone fragility in older, high risk patients over younger ones. Modifying the risk of fracture does not rely only on bone density and, anyway, the potential demand for bone densitometry exceeds availability. The core recommendations are to start drug treatment in all women over 75 who have a minimal trauma fracture without recourse to bone densitometry, advice which will inevitably result in drug treatment for many women who do not have osteoporosis. Recommended treatment for women under 75 is based on a combination of risk factors and measured bone mineral density.

What does this mean for patients and communities? In some areas researchers have used data on the epidemiology of falls and fractures and routine NHS activity data to estimate the extent of the challenge (see box 3 on bmj.com).⁹ In the United Kingdom, services are commissioned by primary care trusts, which in England which are also responsible for implementing the national service framework for older people. In a typical primary care trust population with 30 000 people over 65, each year approximately 2000 people will fall twice or more, 2000 will seek emergency care in hospital, and more than 1000 will sustain osteoporotic fractures.

If all such patients had the more detailed assessment required by the NICE guidelines, most falls clinics and osteoporosis services in secondary care would be overwhelmed. The comprehensive service for preventing falls and fractures envisaged in the national service framework would be considerably more difficult to provide than the equivalent service for patients with stroke, of which the incidence is much lower. Despite this, four years on from the publication of the national service framework, patients' access to the core elements of stroke services is inconsistent.¹⁰ Apart from those who use a handful of specialised services, few patients with fractures due to bone fragility or falls currently receive appropriate interventions to minimise further risks.^{11 12}

Moving from superficially impressive “box ticking” to the desired “whole systems” approach to commissioning such services will require more transparent and thoughtful planning. Guidelines from NICE or other bodies will provide a template that should be tailored to local needs through surveying current

provision, use, and appropriateness of services. This approach will identify gaps in services and patients' unmet needs. Practice can sometimes be changed at no extra cost through education and by re-engineering of processes. Where extra resources are needed, local policy makers must prioritise clearly to ensure that money is spent on those services that are most likely to be effective, rather than those driven serendipitously by local enthusiasts or political fads.

The recommendations in the national service framework and in the latest NICE guidelines provide the impetus to deliver integrated, effective services in the United Kingdom for older people with falls and fractures. At present there are few “comprehensive, integrated” services.⁶ Commissioners of care must face this truth, and clinicians must lobby vociferously for change. A problem so common, so costly, and so harmful—and with this much potential for prevention—does not deserve “backwater” status, just because older people are its main victims.

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