where managed care is fairly well established, allegations of poor quality health care and litigation by inmates because of poor care are not uncommon.[6]

All federal prisons and about 70% of state prisons in the US have copayment schemes for prisoners' health care, and part of the money raised is paid into the Victims of Crime fund.[7] Although this has reduced healthcare costs in prisons,[8 w8] it has adversely affected most poor prisoners, for whom a sick call fee of $5 typically represents two days' wages. Chronically ill and elderly prisoners—who generally have greater healthcare needs but are physically unable to work—have the least income and therefore suffer more as a result of such copayment policies. Evidence so far indicates that the cost of administering the programme is greater than its projected savings.[w9]

Most surveys in the US, Britain, and Australia indicate that prisoners' health is much worse than that of the general population.[7 w10-12] This underlines the need for better initiatives for meeting prisoners' healthcare needs, particularly if it has to be done with the existing (substantial) resources for prisons.

One way to free up resources might be to reduce imprisonment rates, especially for minor crimes.[9] In the UK, Australia, and the US, rates for most major categories of crime are lower than they were 10 years ago, yet prison numbers have risen by about half. In French philosopher Michel Foucault's words, imprisonment has become its own remedy.[10] Greater use of other sentencing options, such as community service for minor offenders, and reserving imprisonment only for offences carrying a sentence of six or more months might reduce imprisonment rates by at least 20% in these countries, given the current average length of imprisonment.

Other ways to reduce the general costs of imprisonment include more mechanised custodial security and fewer staff, although such measures have not yet reduced the costs of staffing. Increased use of live communication via video conferencing between different departments involved with the criminal justice system, however, has allowed the New South Wales (Australia) Corrective Services Department to save $A2.3m (£1m, €1.4m, $1.7m).[3] Inmates may now have their appeals heard by magistrates via such cross-justice videoconferencing, instead of being transported from prison to court.

Reform of prison health services might reduce costs if it brought greater focus on health promotion within the prison population and other preventive services, restructured staffing, obtained discounts through bulk purchases, and maximised resources through better cooperation with other government health agencies.[11 w13] Finally, more effective use should be made of data from research, surveys, and clinical practice to reliably determine prisoners' core health needs, current healthcare practices, and cost effective ways to bridge identified gaps in services.[12 w14]

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Competing interests: None declared.

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Pelvic girdle pain in pregnancy

Exercises may help, and evidence is increasing that acupuncture reduces pain

Musculoskeletal pain in the pelvic area is common during pregnancy and can cause substantial distress and disruption of function. The lack of any standard definitions of such pain, however, makes it difficult to compare reports of prevalence, treatments, and outcomes. Useful terms for different clinical subgroups include pregnancy related pelvic girdle pain and pregnancy related low back pain.[1] Authors of British review articles and case reports often use the term symphysis pubis dysfunction to describe the pain, but others consider that such dysfunction is more often a secondary problem coexisting with lumbar or sacroiliac pain.

A systematic review of 28 studies that used the two terms pregnancy related pelvic girdle pain and pregnancy related low back pain found that prevalence ranged from 3.9% to 89.9% (mean 45.3%).[1] This wide range illustrates the problems of definition, identification, and classification. The authors found that estimates of prevalence depended on the inclusion or exclusion of patients with coexisting pain higher in the back and the definition(s) of musculoskeletal pelvic pain used to select patients.

Pelvic instability in pregnancy or the puerperium has been widely publicised in the media. This may have led to unnecessary medicalisation of pelvic muscu-

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loskeletal pain associated with normal pregnancy.[2] On the other hand, many women do experience considerable impairment of function; around a third report that the pain disturbs their sleep.[1] An Italian study rated functional impairment due to back pain in pregnancy using a validated questionnaire and found that six of 76 women had severe impairment.[3] Intriguingly, impairment scores were higher in women carrying boys than in those carrying girls ($P = 0.0007$ in a multivariate model).

Given that pregnant women experience troublesome pain, however defined, it is important to understand what might cause the pain. The main factors are probably mechanical, due to the alteration in posture required to carry the increasing mass in the abdomen, and hormonal, through changes in the pelvic ligaments. However, the hormone responsible is unclear. Although relaxin acts on human uterine tissue by regulating the expression of metalloproteinases in the matrix,[4] it does not seem to generate musculoskeletal problems. A longitudinal study of 35 women assessed in the first and third trimesters found no association between changes in relaxin concentrations and either the measured laxity of the wrist joints or the onset of pelvic pain.[5] Furthermore, ultrasonography shows an association between the width of the symphysis pubis and pain at that site, irrespective of serum relaxin concentrations.[6] Pregnancy may compromise the inherent stability of bones and ligaments in both the spine and pelvis, requiring muscular activity to maintain stability of the associated joints.

In clinical practice attempts to reduce pain in the lower back and pelvis in pregnant women typically include early education, advice, and exercise prescribed by a physiotherapist. Despite some agreement on definitions of pelvic instability, no pathophysiological subgroups have been identified as a basis for treatment. A practical approach to physiotherapy is to assess individuals and then treat groups of women with similar distribution of pain.[7]

In the United Kingdom, recommended treatment for symphysis pubis pain includes limiting hip abduction to within the range that does not induce pain, reducing other activities that induce pain, and often suggesting the use of a support belt. By contrast, Röst, a Dutch physiotherapist, advocates on the basis of observational data a much more active approach including exercising to increase the range of hip abduction and overcoming functional limitations.[8] Many pregnant women seeking specialist advice for pelvic girdle pain have already tried paracetamol or codeine and found them ineffective. However, some will appreciate advice that paracetamol and weak opioids are safe in pregnancy although non-steroidal anti-inflammatory drugs should be avoided.

Two systematic reviews should also guide practice for pregnant women with non-specific pain in the pelvis or lower back. A Cochrane review found water gymnastics, acupuncture, and use of a specially shaped pillow for sleeping to be beneficial, and its authors said of physiotherapy "There is some measurable reduction in pain with both [acupuncture and physiotherapy], more so with acupuncture but this may be a reflection more of the personal care given by the acupuncturist compared with the group therapy from the physiotherapist."[9] The second systematic review considered nine trials but was not able to extend the conclusions of the Cochrane review because of heterogeneity in the design of the trials.[10]

Elden and colleagues have now reported a controlled trial of acupuncture and stabilising exercises for women with well defined pelvic girdle pain, in which each control participant was offered advice, a pelvic belt, and muscle strengthening exercises.[11] The authors analysed treatment effects for subgroups with different patterns of pain on a visual analogue scale. After treatment, pelvic pain was reduced significantly in the group who had stabilising exercises compared with controls (median difference 9 points ($P = 0.0312$) for pain in the morning; 13 points ($P = 0.0245$) in the evening), but the reduction in pain was even greater for those who had acupuncture (12 in the morning and 27 in the evening, both $P < 0.001$). Those caring for women with pregnancy related pelvic pain now need to press for increased availability of acupuncture, and researchers need to assess the potential benefits of combining acupuncture with stabilising exercises.

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Competing interests: None declared.

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