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Urgent care in England

Report proposes superficially attractive demand management strategies but ducks problems

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A report on the future of urgent care in England proposes better support for self care, improved access to care outside hospital, and better care for the most serious conditions in a reduced number of "major emergency centres."[1] The report seeks to deal with the problem of rising demand in emergency departments and focuses on reducing demand. However, demand is not the whole problem,[2] and a recent *BMJ* editorial concluded that pressure in emergency departments is caused more by seriously ill patients than by "minor" patients who could be treated elsewhere.[3] The focus on demand management also ignores the problems caused by falling bed capacity in hospitals and the inability to discharge patients for lack of community support. A King's Fund report highlighted delayed discharges and poor bed availability as major reasons for inefficiencies in the emergency department.[4]

The report is right that NHS urgent care needs to be simpler. Most parts of the country have primary care urgent care centres, and most requests should be channelled through these centres. What the report curiously omits is the option to co-locate primary care centres adjacent to emergency departments.[5 6] This would reduce confusion, provide a single place for patients to go when they are ill, and ensure that they rapidly see the right clinician. Caution is needed regarding the suggestion of additional community based resources—for example, pharmacists trained to deal with minor illness—because new services often increase use (supply induced demand).

Several solutions are based more on wishful thinking than on evidence. Although self management and care planning are cited as evidence based solutions to rising demand,[7] evidence for their cost effectiveness in reducing the use of secondary care is weak outside a small number of conditions.[8-10] There is also an over-reliance on the new NHS 111 phone service, which duplicates some existing services, uses relatively inexperienced call operators as first line contacts, and probably increases emergency department attendances and ambulance call-outs.[11] The use of inexperienced staff for triage also ignores evidence from hospitals that senior members of staff are better than juniors at keeping patients out of hospital.[12] Evidence from Denmark suggests that the costs of out of hours care would rise rather than fall if nurses were substituted for doctors in triaging out of hours calls.[13]


KAREN BRETT/SPL

"The use of inexperienced staff for triage also ignores evidence from hospitals that senior members of staff are better than juniors at keeping patients out of hospital"

A more important cause of strain on emergency departments is that patients are becoming more complex. The report makes much of relatively uncommon acute conditions, such as heart attack requiring percutaneous coronary intervention and major trauma. However, a greater clinical and numerical challenge for urgent care is the frail older people who have become confused and unsteady on their feet but have no clear diagnostic features. Even if a diagnosis can be made within the four hour access standard, it is often impossible to arrange appropriate community and social care support to allow patients to be discharged home safely. Furthermore, when an old person is admitted to hospital, a crowded hospital system often leads to inefficient management. For example, the person may be admitted to a ward not permanently staffed by a multi-disciplinary geriatric team.

The report is right in suggesting that we have too many emergency departments, and that not all can do "anything and everything." However, the proposed separation into emergency departments and major emergency departments raises many questions. It is unclear how governments will deal with the local unpopularity of downgrading emergency departments and how patients will be triaged to the scaled down departments. In addition, will the departments be run by specialists or GPs, and how will they be staffed? Such posts may be both unpopular and unsuitable for training. This reorganisation also fails to deal with the fundamental problem of insufficient capacity in emergency care.

There is much sense in this report. In the second phase of the work, NHS England must examine the whole emergency care system, including the internal organisation of hospitals. It must recognise that interventions for restricted patient groups, such as major trauma or stroke, may not work for the majority of patients who have undifferentiated illness. Superficially attractive solutions that increase demand need to be avoided.

Competing interests: None declared.
Provenance and peer review: Commissioned; not externally peer reviewed.
References are in the version on bmj.com.
Cite this as: *BMJ* 2013;347:f7046

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Surgery for neurogenic claudication and spinal stenosis

Time to think again about controversial (and costly) interspinous devices

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A linked paper by Moojen and colleagues reports on a well executed randomised controlled trial in the Netherlands that compared two treatment options for adults with neurogenic claudication secondary to spinal stenosis.[1] The researchers randomised 159 adults with lumbar stenoses at one or two vertebral levels into two groups. One group was treated with conventional decompressive surgery and the other with an interspinous spacer. Moojen and colleagues found little difference in a range of outcomes between the groups, although those treated with a spacer were significantly more likely to need revision surgery than those treated with conventional surgery (29% *v* 8%). A similarly high revision rate after treatment with interspinous spacer devices was recently reported in a trial from Sweden.[2]

Spinal stenosis, or narrowing of the vertebral canal, was first described in English in 1954 by a Dutch neurosurgeon.[3] He made the important distinction between "developmental" (seen in achondroplasia but also in normal people) and "degenerative" stenosis (secondary to distortion of the normal anatomy by disc degeneration). Two years later, Blau and Logue coined the term neurogenic claudication for the syndrome linked to spinal stenosis.[4] The advent of whole body imaging (computed tomography and then magnetic resonance imaging) made clinicians more aware of the disease.

Our ageing and generally fitter population has brought this disabling condition into the limelight. Most primary care doctors are now skilled at distinguishing neurogenic from vascular claudication. Back and leg pain on standing and walking are cardinal symptoms. A wide range of other musculoskeletal, neuromuscular, cardiac, and respiratory conditions can affect walking capacity. All these comorbidities affect the diagnosis of neurogenic claudication and the outcome of treatment. Most adults with neurogenic claudication can be managed safely and effectively with advice, analgesics, and walking aids. But some find the condition so frustrating and painful that they seek surgical advice. Conventional surgery involves widening the vertebral canal and sometimes spinal fusion. It is invasive, and although results are often better than with conservative treatment, benefits aren't guaranteed. In one large study from the United States, 63% of people with neurogenic claudication from spinal stenosis were "very/somewhat satisfied with symptoms" four years after surgery compared with only 32% after non-operative care.[6] The NHS Spine Task Force in the UK, which reported earlier this year, estimates that about 20000 operations are done each year in England, and surgery rates are likely to rise in line with population ageing and public health expectations (www.nationalspinaltaskforce.co.uk/).

More revisions than with conventional surgery

Surgeons have long looked for less invasive ways to decompress the vertebral canal. One technique is to insert a spacer between the spinous processes of adjacent lumbar vertebrae to create a local flexion deformity at that level and indirectly decompress the canal and exiting nerve roots. This can be done as a day case, often under local anaesthetic. In theory, these interventions should cause less pain and blood loss as well as fewer complications than standard surgery, but this has not been proved. A theoretical problem is that a spacer may exacerbate sagittal imbalance. Intraoperative measurement of motor evoked potentials indicates that an optimum interspinous distraction of 8 mm will produce an immediate effect equivalent to decompression.[7]

Most manufacturers of spinal implants market a spacer, but they are surprisingly costly (around £1000; €1191; $1607). Eight hundred and sixty four interspinous spacers were inserted in England in 2010-11. The evidence base is poor, with low quality studies, and many surgeons are unconvinced of the efficacy of such spacers. Some patients might accept a revision rate of 29% as a price for having a lesser procedure that provides a reasonable chance of avoiding full surgery. Some surgeons argue that spacers for neurogenic claudication should be considered in the same way as epidurals for back pain, where a high failure rate is acceptable.[8] But these problems require careful discussion during the consent process.

The effects of spinal stenosis can be alleviated by flexing the lumbar spine, although in patients with poor sagittal balance further flexion of the spine may exacerbate back pain. Unfortunately, we still have much to learn about how disc degeneration and progressive stenosis may link to symptoms. A Japanese study recruited a large population based cohort of middle aged and elderly adults with clinical and magnetic resonance imaging data.[9] The investigators were surprised at the high frequency of spinal stenosis. More than three quarters (78%) of participants had some evidence of stenosis on magnetic resonance imaging and close to a third (30%) had severe stenosis. Only 17% of those with severe stenosis had symptoms of neurogenic claudication, however, and some people with symptoms have no evidence of stenosis. Unrecognised loss of sagittal balance and peripheral vascular disease affecting nerve root nutrition can both mimic neurogenic claudication. A precise diagnosis can be difficult to achieve. The half a million strong cohort in the United Kingdom's Biobank (www.ukbiobank.ac.uk/) may prove to be a resource that can be exploited to understand this condition better. Unfortunately, however, Biobank participants were not tested for sagittal imbalance and did not undergo imaging of the vertebral canal.

Neurogenic claudication is an important and disabling symptom in an ageing but otherwise healthy population. Walking capacity is an important public health indicator that deserves more attention. Pain that limits walking has a major impact on quality of life. Back pain and spinal disorders have headed the list of global burden of disease on both occasions that this analysis has been carried out, yet they are close to the bottom of the list when it comes to research investment.[10] We need a better understanding of the mechanisms that underlie neurogenic claudication. We also need to improve our ability to stratify patients for optimum treatment selection. Spacer devices should become cheaper with time. Alternative decision pathways should also be carefully evaluated by health economists.

Competing interests: None declared.
Provenance and peer review: Commissioned; not externally peer reviewed.
References are in the version on bmj.com.
Cite this as: *BMJ* 2013;347:f6930

RESEARCH, p 11

"It is important to recognise that public health and primary care interventions influence the risk profile of pregnant women"

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Watch a video abstract of this paper at bmj.com/content/347/bmj.f6470

Sharper focus on uncomplicated pregnancy

May help develop and evaluate population interventions

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Many studies have identified factors associated with complications of pregnancy, such as maternal age, ethnicity, obesity, smoking, and pre-existing medical conditions.[1-3] In a linked paper, Chappell and colleagues take the opposite approach and use information from a large cohort of nulliparous women in Australia and the United Kingdom to investigate factors associated with uncomplicated pregnancy.[4] This robust approach is welcome in the context of initiatives to step back from the medicalisation of pregnancy and provides useful information for women, clinicians, and policy makers.

The authors divide factors associated with uncomplicated pregnancy into those that they consider modifiable—such as raised body mass index, drug misuse before pregnancy, and fruit intake before pregnancy—and those considered not amenable to change, including a family history of hypertension and maternal socioeconomic index. The study is observational and we cannot assume causality, so replication in similarly robust studies may be needed before we consider interventions to help change these modifiable factors. Nevertheless, it is clear that these factors will not be modified by actions during pregnancy alone. Public health and policy interventions, alongside pre-pregnancy care and counselling, will probably be needed. This is the key message for policy makers.

It is important to recognise that public health and primary care interventions influence the risk profile of pregnant women. Folate supplements, for example, have a well established role in improving outcomes. However, the challenge remains to identify evidence based interventions that will achieve the desired changes in women's risk profiles. As Chappell and colleagues note, there is little high quality evidence on pre-pregnancy interventions to promote healthy behaviours. A Cochrane review identified only four randomised controlled trials of pre-pregnancy health promotion, which looked at a total of 2300 women.[5] None of the trials followed all women adequately through their entire pregnancy and delivery. Several Cochrane reviews of preconception care for women with specific conditions, such as epilepsy and diabetes, have been unable to identify any studies evaluating the impact of such care on pregnancy outcome. There is a clear message here for researchers.

Over a quarter of pregnancies are unplanned,[6] so we must also develop and evaluate interventions designed to improve pregnancy outcomes within general populations of women, such as health promotion initiatives based in schools and communities. Population programmes inevitably take a long time to work (if they work at all). It is difficult to obtain robust evidence of benefit, which adds to the challenge of public health research in this area.

In their analysis, Chappell and colleagues classify maternal socioeconomic index as not being amenable to modification; this approach risks diverting attention away from actions designed to tackle social determinants of health. Considerable evidence links higher socioeconomic status to better health, in maternity care[1 7 8] and more generally.[9] There is some evidence that countries with a narrow gap between incomes have better overall health, and that income inequality is strongly detrimental to health in young adulthood.[10] High level policy actions to modify socioeconomic disadvantage and income inequality are therefore important in the context of improving pregnancy outcomes.

Chappell and colleagues define uncomplicated pregnancy as "a normotensive pregnancy, delivered at >37 weeks, resulting in a liveborn baby who was not small for gestational age, and did not have any other significant pregnancy complications." Interestingly, their definition of pregnancy complications did not include interventions during delivery, such as caesarean section or operative vaginal delivery. Definitions of normal pregnancy vary,[11] but generally exclude operative delivery. Although knowledge of factors associated with uncomplicated pregnancy may be an important motivator, the definition of uncomplicated pregnancy must be one that is meaningful to women, and future studies should take this into account.

Importantly, the current study did not consider hospital or care factors that might be associated with uncomplicated pregnancy. A recent study investigating safety of place of birth in low risk women clearly showed reduced rates of intervention in low risk women giving birth in midwife led units compared with obstetrician led units.[12] Actions to promote delivery in midwife led settings may also help increase the likelihood of uncomplicated birth.

For some women, however, obstetrician led antenatal care may be the most appropriate pathway to uncomplicated, or at least less complicated, pregnancy and delivery. The current analysis was based on a cohort of women recruited to develop predictive models for pre-eclampsia, small for gestational age infants, and preterm birth, and women thought to be at high risk of these conditions were excluded. This study therefore provides no information on women with underlying medical conditions, such as chronic hypertension or diabetes, and further research is needed to assess factors associated with uncomplicated pregnancy in these subgroups. The cohort also excluded multiparous women, which reduces generalisability still further.

We must be careful not to overinterpret these findings, and it is probably too early to calculate the potential numerical benefit of population approaches to modifying risk factors, as the authors attempt to do in their discussion. As Chappell and colleagues note, the most important next step is to replicate their approach, shift the focus of research from abnormality to normality, obtain clear evidence of causality, and start to build a robust evidence base to guide population interventions.

Competing interests: My institution has received money to fund studies on pregnancy complications from various non-commercial grant giving bodies, and some of this funding has formed part of my salary.

Provenance and peer review: Commissioned; not externally peer reviewed.

References can be found in the version on bmj.com.

Cite this as: *BMJ* 2013;347:f6470

RESEARCH, p 12

"Arguably, patients now have more control over their data because, for the first time, they can simply object to any secondary uses of them"

Patient confidentiality in a time of care.data

The benefits of unlocking patient data are enormous; hopefully the risks can be managed

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The NHS is in the midst of an information revolution. Powers introduced by the Health and Social Care Act will enable the Health and Social Care Information Centre to extract large amounts of personal confidential data from GP medical records. These powers over-ride the common law duty of confidentiality and the ordinary requirement to seek consent for disclosure, although patients have a right to object to their data being disclosed.

Any large scale use of sensitive personal data inevitably raises ethical concerns, and, unsurprisingly, the new powers have sparked controversy. Public confidence in large publicly held databases, and in the politicians who commission and control them, is scant. Trust between doctors and patients and consequently in the wider health service is predicated on the belief that, in all but exceptional circumstances, confidentiality will be respected. But the potential benefits arising from the proper use of medical data are too important to be ignored without exceptional reason. We therefore must be clear about what the changes involve and what the benefits might be.

The first use of the new powers is the care.data initiative, commissioned by NHS England.[1] Initially, it will focus on providing information for commissioners, so that they can better match services to patient needs. Good data are straightforwardly critical to the planning, commissioning, and delivery of high quality targeted care. Care.data will link data from GP records with data from secondary care to enable valuable analysis of care pathways. In the future, data could be made available for approved research purposes.

The potential locked in these data is extensive. Consider the possibilities for longitudinal studies in pharmacoepidemiology or in monitoring population health. Nor do these benefits come at the cost of a data "free for all." The safeguards are stringent. Although the Health and Social Care Act makes uploading of data to the Health and Social Care Information Centre lawful, they can be released only if there is an existing legal basis to do so. Put simply, the act's powers can get data into the information centre but not out. Consent from the patient, approval under s.251 of the NHS Act 2006, or another legal basis is needed before identifiable data can flow out.

Patients say ?

So what of the security of the data held by the information centre? The data extracted from GP records include four identifiers: NHS number, date of birth, postcode, and sex, but not the patient's name and address. These identifiers are needed to enable linking of GP data to other sources. Importantly, the information centre processes the data automatically: only rarely will its staff see any data. The information centre also keeps the data and identifiers separate. When GP data are linked to data from other sources they are pseudo anonymised: the identifiers are replaced with a code and a new record is created that does not identify the individual.

The release of data from the information centre is also controlled. Data can be released in three ways. Firstly, anonymised or aggregated data can be provided in accordance with the guidance issued by the information commissioner. Secondly, pseudoanonymised data that may, exceptionally, be identifiable, such as when a patient has a rare condition, can be released only to approved organisations and when a legal contract is in place. Thirdly, identifiable data can be released only when there is a legal basis, such as patient consent or with s.251 approval. Patients can also object to any of their identifiable data leaving either the GP practice or the information centre.

Arguably, patients now have more control over their data because, for the first time, they can simply object to any secondary uses of them. Also, although GPs are legally obliged to provide the data, they are still subject to the fair processing requirements of the Data Protection Act. This means that GPs must ensure that people's personal data are used in ways that are transparent and that they would reasonably expect.[2] Again, this is not a data free for all.

As with all large publicly held databases there are risks. Public confidence in the government's ability to manage them properly is low. In the absence of public trust, it is easy to sow the suspicion that the data might be used for altogether different purposes. Extracting data without explicit patient consent could damage the public perception of the confidentiality of their data, thereby affecting trust and the uptake of health services. Although patients can object to their data being transferred, shifting the default position to "opt out" could be interpreted as restricting patient choice.

Given the volume and sensitivity of the data held, any breach is likely to have serious consequences. If even military databases can be hacked, there will inevitably be worries about the safety of the information centre database. But against these concerns—real as they are—must be weighed the enormous potential benefits for individuals, the proper functioning of the health service, and the development of future healthcare and treatments that are locked in the data. In our view, the ethical arguments in favour of data sharing are strong; after all, patients retain a right to object to any sharing of their data with the Health and Social Care Information Centre. And a leaflet drop to all English households in January, several months before the extractions start, will go some way to making sure that people know what is happening with their data. Unlocking the potential held in the records is a vital public good and is to be commended. But in taking this step, the government still has a job to reassure the public that its trust is not misplaced.

Competing interests: Apart from being employed by the BMA, which supports the care.data initiative, we have no other known conflicts of interest.

Provenance and peer review: Commissioned; not externally peer reviewed.

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Cite this as: *BMJ* 2013;347:f7042