Charlie Alliston was recently convicted of “wanton and furious driving” and jailed for 18 months. A pedestrian, Kim Briggs, was killed when Alliston, riding a bicycle that was not fitted with a front brake, collided with her in London in 2016.

In the wake of his conviction we’ve heard significant murmurings from the media that cyclists, as part of a “minority activity,” have had it too easy. Some suggest that cyclists not only require some form of regulation but are responsible for causing car congestion, as bike lanes are allegedly underused. A police and crime commissioner in England has called for cyclists to have some kind of registration display.

The government, in the meantime, has responded by accelerating a review of the law (pending since 2015) to “consider whether a new offence equivalent to causing death by careless or dangerous driving should be introduced for cyclists.” This review will have two phases. The first will consider whether a new cycling offence should be placed into statute. The second is a consultation about road safety and “the different ways in which safety can be further improved between cyclists, pedestrians, and motorists.”

Doctors should care about cycling, as it’s one of the best preventive health interventions we have. Active commuting, including cycling, is associated with reductions in mortality, cardiovascular disease, and cancer. Body mass index and the percentage of body fat are lower in active commuters. Car drivers who switch to commuting by bike report slightly higher wellbeing scores.

And it’s not just the individual cyclist who benefits. In every area of London, air pollution now exceeds World Health Organization air quality guidelines. Car drivers who switch to a bike will reduce air pollution, and, since we know that pollution has significant adverse health effects, this will benefit society in general.

The government says that, “in 2015, two pedestrians were killed and 96 seriously injured after being hit by a bicycle. Every year more than 100 cyclists are killed and more than 3000 seriously injured on British roads.” This is true, and it’s not the whole story. The annual average number of pedestrians killed by a car from 2011 to 2015 was 215, and 3913 were seriously injured. The scale of injury caused to pedestrians by bikes is dwarfed by the damage caused by cars.

I’m concerned that the tragic Alliston case will be used to create laws and restrictions that won’t make pedestrians and citizens safer or healthier. It may result in changes that make cycling a harder option, not an easier one. In Copenhagen some 45% of journeys to work and education are made by bike, and cyclists find this faster and easier. It’s also good for their health and for others living in Copenhagen.

Contrary to perception, Denmark lost its reputation as a cycling city in the mid-1960s, amid a realisation that it had become polluted and dangerous to cycle in. It required commitment, infrastructure, public buy-in, and encouragement to create the magnificent cycleways it now has. We need the same vision in the UK—and, to do that, we need plain sight of where the dangers are.

Margaret McCartney is a general practitioner, Glasgow
margaret@margaretmccartney.com
Follow Margaret on Twitter, @mgtmccartney
Cite this as: BMJ 2017;359:j4921
ACUTE PERSPECTIVE

David Oliver

The bewildering case of the “NHS Airbnb” news story

As the NHS approaches its busiest time of year, politicians and the media are ramping up their focus on very real winter pressures. Overcrowded emergency departments, ambulances stuck outside, and patients on trolleys in corridors, are sure to make headlines. And don’t forget a pandemic scare: this year it’s Australian flu. No laughing matter, but hardly the only threat; influenza-like illnesses (ILI) from which people recover uneventfully. Australia’s latest season was worse than most, with a record number of laboratory confirmed cases (170,000), although better availability of molecular tests may account for much of the rise, as visits for ILIs rose only slightly above the annual average. The northern hemisphere is now braced for its turn.

"founded by part time A&E doctor Harry Thirkettle," the Health Service Journal reported, proposed giving homeowners £50 a night, maximum £1000 a month, to accommodate patients who were “medically fit for discharge, who don’t have cognitive impairment and would come to us because they don’t have support, or live alone or have mobility issues.”

This was a proposal of a small scale, local pilot scheme that hadn’t yet taken a single patient

The example Thirkettle gave to the Times was a patient who can’t climb stairs because of a fracture, who can stay in ground floor accommodation.

PUBLIC HEALTH PROFESSIONALS keep a wary eye out for flu epidemics, bearing in mind the greatest pandemic at the end of the first world war, when tens of millions died.

Flu epidemics come every year, but their severity varies. Normally flu is simply one of many indistinguishable influenza-like illnesses (ILI) from which people recover uneventfully. Australia’s latest season was worse than most, with a record number of laboratory confirmed cases (170,000), although better availability of molecular tests may account for much of the rise, as visits for ILIs rose only slightly above the annual average. The northern hemisphere is now braced for its turn.

Public health professionals keep a wary eye out for flu epidemics, bearing in mind the greatest pandemic at the end of the first world war, when tens of millions died.

Flu epidemics come every year, but their severity varies. Normally flu is simply one of many indistinguishable influenza-like illnesses (ILI) from which people recover uneventfully. Australia’s latest season was worse than most, with a record number of laboratory confirmed cases (170,000), although better availability of molecular tests may account for much of the rise, as visits for ILIs rose only slightly above the annual average. The northern hemisphere is now braced for its turn.

Occasionally, flu can cause severe illness or death, especially in elderly people. Sometimes different strains put unexpected population groups at risk (pregnant women, patients with asthma or diabetes, obese people). So what can we do to prepare?

**Social norms mean that people balk at wearing face masks, except in east Asian countries**

More people have been hospitalised with flu this winter than any other time over the past three years.

At press time early this month, 29 people had died with flu since the start of the epidemic, causing hospitals to extend discharge times once more. In the UK, 10% of emergency admissions are influenza-related. A recent study from the United States warned that in the 2009 pandemic, a large proportion of those in hospital with flu were in young people, many of whom were immunocompromised.

**Three main options**

The current options are vaccination, antivirals, and hygiene interventions. Most attention is on vaccination, which is curious, because its effectiveness is disappointing. Given influenza’s very low annual incidence, vaccination would bring only a drop from 2% to 1%, clinically imperceptible because of the much higher incidence of ILIs. Genetic drift in the virus means yearly revaccination with modified antigens, bringing an element of uncertainty to each year’s effectiveness. Vaccination seems to have been less effective recently, especially against the predominant viruses in circulation (A H3 and B strains), with little or no protection in elderly patients against H3 last winter in the UK and elsewhere.

Moreover, people who have repeat vaccinations have less protection, for unknown reasons. Annual flu vaccination is based on poor evidence and may be overpromoted. Use of antiviral neuraminidase inhibitors is controversial. They reduce flu symptoms by about half a day in a five day illness, but any effect on secondary infections or admissions to hospital, or on spread of the virus in an epidemic, remains uncertain.

**Modified vaccines**

The start-up company CareRooms, "founded by part time A&E doctor Harry Thirkettle," the Health Service Journal reported, proposed giving homeowners £50 a night, maximum £1000 a month, to accommodate patients who were “medically fit for discharge, who don’t have cognitive impairment and would come to us because they don’t have support, or live alone or have mobility issues.” This was supposedly to start at Southend Hospitals Trust.

The example Thirkettle gave to the Times was a patient who can’t climb stairs because of a fracture, who can stay in ground floor accommodation.

**Annual flu epidemics come every year, but their severity varies. Normally flu is simply one of many indistinguishable influenza-like illnesses (ILI) from which people recover uneventfully. Australia’s latest season was worse than most, with a record number of laboratory confirmed cases (170,000), although better availability of molecular tests may account for much of the rise, as visits for ILIs rose only slightly above the annual average. The northern hemisphere is now braced for its turn.**

**Occasionally, flu can cause severe illness or death, especially in elderly people. Sometimes different strains put unexpected population groups at risk (pregnant women, patients with asthma or diabetes, obese people). So what can we do to prepare?**

**Three main options**

The current options are vaccination, antivirals, and hygiene interventions. Most attention is on vaccination, which is curious, because its effectiveness is disappointing. Given influenza’s very low annual incidence, vaccination would bring only a drop from 2% to 1%, clinically imperceptible because of the much higher incidence of ILIs. Genetic drift in the virus means yearly revaccination with modified antigens, bringing an element of uncertainty to each year’s effectiveness. Vaccination seems to have been less effective recently, especially against the predominant viruses in circulation (A H3 and B strains), with little or no protection in elderly patients against H3 last winter in the UK and elsewhere.

Moreover, people who have repeat vaccinations have less protection, for unknown reasons. Annual flu vaccination is based on poor evidence and may be overpromoted. Use of antiviral neuraminidase inhibitors is controversial. They reduce flu symptoms by about half a day in a five day illness, but any effect on secondary infections or admissions to hospital, or on spread of the virus in an epidemic, remains uncertain.

**Modified vaccines**

The start-up company CareRooms, “founded by part time A&E doctor Harry Thirkettle,” the Health Service Journal reported, proposed giving homeowners £50 a night, maximum £1000 a month, to accommodate patients who were “medically fit for discharge, who don’t have cognitive impairment and would come to us because they don’t have support, or live alone or have mobility issues.” This was supposedly to start at Southend Hospitals Trust.

The example Thirkettle gave to the Times was a patient who can’t climb stairs because of a fracture, who can stay in ground floor accommodation.
scrutiny. This was a proposal of a safeguarding concerns and the lack would need vetting because of potential CareRooms “hosts” led step-down wards still require stable patients in nurse or therapist teams who know them. Medically they have medical complications their home, not someone else’s. If from work or school (instead, admiring people who are infectious stay away from statutory social services or Japan). Nor do such norms insist that three.

and WHO has recently taken it off its Model List of Essential Medicines.

**Hygiene is extremely effective**

Hygiene methods such as face masks, handwashing, and quarantine have been found to be extremely effective at protecting against acute respiratory infections in a Cochrane review, with numbers needed to treat as low as three. Why are these not canvassed as heavily as vaccination or antivirals? It would be facile only to blame the promotion of drugs. Social norms mean that people, although accepting handwashing (or sterilisation in public places), baulk at wearing face masks (except in east Asian countries such as Japan). Nor do such norms insist that people who are infectious stay away from work or school (instead, admiring them for “soldiering on”) or that mass gatherings (sports and cultural events) are cancelled. People (including clinicians) expect medical technology to be more effective than is realistic, all the more reason for supporting sensible low technology policies, such as one Australian state’s intention to install hand hygiene dispensers on trains, with a campaign to promote “cough into your elbow.”

**What about the threat of pandemics?**

In 1918-19 huge numbers of returning troops, exhausted and inadequately fed, plus poor management of secondary bacterial infections, contributed to the pandemic’s magnitude. Some of these factors might have less of a role in a modern recurrence, but not others, such as a vastly more mobile population, which would render near useless any quarantine isolation. It is hard to see what could be done to mitigate a catastrophe that was not rehearsed in recent avian and swine flu epidemics.

In the meantime, it is clear we need better vaccines, with better evaluation, and public promotion of mask wearing and hand hygiene.

---

**Unmeasured interventions**

How do we measure our value as clinicians? Throughout my training I was warned “publish or perish.” This is a seam that runs throughout our professional lives. It is easy to count publications and presentations: to tot up impact factors and citations to show the quality of our work and to quantify our worth. Clinicians understand the currency of academic contribution: statistical significance is measurable and clinical significance demonstrable. But for clinicians who contribute in myriad other ways, quantifying value is a far greater challenge.

Interventions that improve performance, enhance organisational culture, and achieve valuable change require many qualities: humility, resilience, adaptability, collaboration, and leading by example. Though these seem to be appreciated and acknowledged by clinical leaders, there remains a gap in how we demonstrate and quantify them.

Patients know how to measure the value of their clinicians. In a recent, beautifully written account on BMJ Opinion (blogs.bmj.com), Sharon Roman articulated the qualities she believes make an exceptional doctor. Knowledge is “an obvious beginning but by no means the end.” Taking patients seriously, being honest, making people feel safe (“not only cared for but cared about”), having strength of character… we all know these are important attributes, yet how do we measure them, and how many points are they worth on application forms?

**We need to think about rewarding excellence in areas without quantifiable metrics**

Preparing for a recent job interview, I considered how I would respond when asked, “What would you bring to the department?” We all know what would enable the panel to put checks on the score sheet: experience in research, teaching, audit, management. But what would my patients and colleagues want me to bring? A sense of humour, ability to learn, willingness to listen, flexibility, transparency, kindness, compassion, generosity, grace.

We should, of course, reward excellence in clinical academia, but we need to think more creatively about how we reward excellence in other areas that don’t provide such identifiable and quantifiable metrics.

So, for my next job application, by all means ask me to demonstrate how I have contributed to the body of scientific knowledge and advanced the frontiers of evidenced based medicine. But ask me, too, how I make people feel, because that’s what you really need to know.

---

**Unmeasured interventions**

How do we measure our value as clinicians? Throughout my training I was warned “publish or perish.” This is a seam that runs throughout our professional lives. It is easy to count publications and presentations: to tot up impact factors and citations to show the quality of our work and to quantify our worth. Clinicians understand the currency of academic contribution: statistical significance is measurable and clinical significance demonstrable. But for clinicians who contribute in myriad other ways, quantifying value is a far greater challenge.

Interventions that improve performance, enhance organisational culture, and achieve valuable change require many qualities: humility, resilience, adaptability, collaboration, and leading by example. Though these seem to be appreciated and acknowledged by clinical leaders, there remains a gap in how we demonstrate and quantify them.

Patients know how to measure the value of their clinicians. In a recent, beautifully written account on BMJ Opinion (blogs.bmj.com), Sharon Roman articulated the qualities she believes make an exceptional doctor. Knowledge is “an obvious beginning but by no means the end.” Taking patients seriously, being honest, making people feel safe (“not only cared for but cared about”), having strength of character… we all know these are important attributes, yet how do we measure them, and how many points are they worth on application forms?

**We need to think about rewarding excellence in areas without quantifiable metrics**

Preparing for a recent job interview, I considered how I would respond when asked, “What would you bring to the department?” We all know what would enable the panel to put checks on the score sheet: experience in research, teaching, audit, management. But what would my patients and colleagues want me to bring? A sense of humour, ability to learn, willingness to listen, flexibility, transparency, kindness, compassion, generosity, grace.

We should, of course, reward excellence in clinical academia, but we need to think more creatively about how we reward excellence in other areas that don’t provide such identifiable and quantifiable metrics.

So, for my next job application, by all means ask me to demonstrate how I have contributed to the body of scientific knowledge and advanced the frontiers of evidenced based medicine. But ask me, too, how I make people feel, because that’s what you really need to know.

---

**Unmeasured interventions**

How do we measure our value as clinicians? Throughout my training I was warned “publish or perish.” This is a seam that runs throughout our professional lives. It is easy to count publications and presentations: to tot up impact factors and citations to show the quality of our work and to quantify our worth. Clinicians understand the currency of academic contribution: statistical significance is measurable and clinical significance demonstrable. But for clinicians who contribute in myriad other ways, quantifying value is a far greater challenge.

Interventions that improve performance, enhance organisational culture, and achieve valuable change require many qualities: humility, resilience, adaptability, collaboration, and leading by example. Though these seem to be appreciated and acknowledged by clinical leaders, there remains a gap in how we demonstrate and quantify them.

Patients know how to measure the value of their clinicians. In a recent, beautifully written account on BMJ Opinion (blogs.bmj.com), Sharon Roman articulated the qualities she believes make an exceptional doctor. Knowledge is “an obvious beginning but by no means the end.” Taking patients seriously, being honest, making people feel safe (“not only cared for but cared about”), having strength of character… we all know these are important attributes, yet how do we measure them, and how many points are they worth on application forms?

**We need to think about rewarding excellence in areas without quantifiable metrics**

Preparing for a recent job interview, I considered how I would respond when asked, “What would you bring to the department?” We all know what would enable the panel to put checks on the score sheet: experience in research, teaching, audit, management. But what would my patients and colleagues want me to bring? A sense of humour, ability to learn, willingness to listen, flexibility, transparency, kindness, compassion, generosity, grace.

We should, of course, reward excellence in clinical academia, but we need to think more creatively about how we reward excellence in other areas that don’t provide such identifiable and quantifiable metrics.

So, for my next job application, by all means ask me to demonstrate how I have contributed to the body of scientific knowledge and advanced the frontiers of evidenced based medicine. But ask me, too, how I make people feel, because that’s what you really need to know.
Why doctors need to include patients in their diagnoses

Shared diagnostic decisions are under-researched and differ from reaching consensus on treatment options. Zackary D Berger and colleagues discuss how uncertainty and stakes should shape the conversation.

In 2001, the US National Academy of Medicine set out its vision to prioritise patient centred care: to ensure clinical decisions “respect patients’ wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their care.” Similar aims exist in UK health strategy.

Patient centred care is best delivered in relationships that foster shared decision making; an approach that has been shown to encourage health promoting behaviours, reduce inappropriate care, and improve patient and doctor satisfaction.

Sharing decisions and diagnosis

Shared decision making goes beyond simple information exchange: it emphasises collaborative, often iterative, deliberation between patients, family, and clinicians, to advance the desired outcomes identified by the patient.

This deliberation should cover patient preferences that are global (such as the patient’s capacity and desire to be involved in decision making) and specific (such as the patient’s concerns, knowledge, and prior beliefs and preferences about specific diseases or tests). The clinician should seek to understand the patient in both the customary patient role and as a unique individual whose personhood extends beyond their illness. Table 1 shows the techniques that doctors can use to achieve the goals of patient centred care.

Despite the well recognised burden of diagnostic error and rising use and cost of diagnostic tests, interventions to encourage shared decision making have largely focused on screening and treatment decisions. Meanwhile, the importance of shared diagnostic decisions has been relatively neglected.

Although the processes of diagnosis and treatment are not completely decoupled, shared decision making for diagnosis has distinct considerations (table 2). A key difference is the nature of the patient’s concerns; treatment decisions assume an existing condition, whereas diagnostic situations require clarification of the condition; for example, “my child fell and hit his head, does he need a brain scan?” This difference is critical, because uncertainty is often much greater for diagnosis than treatment, making it much more challenging to explain the options and weigh the risks and benefits to the patient.

Avoid the “cascade effect”

Managing the wide array of diagnostic possibilities for an undifferentiated symptom is also complicated by a patient’s tolerance of uncertainty, how they as individuals manage trade-offs between false negative and false positive results, and how they act on test results. Precisely quantified benefits and harms are less likely to be available for diagnosis than treatment, especially with respect to incidental or false positive results. This is sometimes referred to as the “cascade effect,” in which initial, smaller scale decisions give rise to a chain of diagnostic procedures that might be unwarranted in hindsight. Additionally, a patient’s values and preferences might be unstable, undefined, evolving, or difficult to express verbally or explicitly: patients may just have a “gut feeling” about a decision that is hard to articulate. As a result, decision making for diagnosis is often more iterative than for treatment, and may need to happen over an extended period of time.

The nature, detail, and depth of the shared decision making process depends on the unique characteristics of the patient and the clinical context; uncertainty intolerable to a doctor might be tolerable to a patient, and a high stakes decision for one patient might be a moderate or low stakes decision for another.

Diagnostic uncertainty includes incomplete information (such as early manifestations or common, undifferentiated symptoms), limited evidence (including unknown diagnostic test sensitivity and specificity), or unclear impact of patient preferences on appropriate choice of...
diagnostic strategies for achieving health goals. Stakes refer to the potential impact of benefits or harms of diagnostic workups on outcomes that matter to patients.

Uncertainty and stakes should be viewed through meaningful conversation with the patient. How they should guide the intensity of conversations (fig 2, see bmj.com) is explored below in several case studies.

Case studies
For routine diagnostic cases or, more broadly, when uncertainty and risks of testing are both low, clinicians should focus on conveying in a straightforward manner the value of the diagnostic procedure.

Clinicians should seek to obtain the patient’s consent to proceed with testing but need not generally engage in deeper, more detailed shared decision making dialogue unless the patient hesitates, hedges, or declines (see box on low back pain below).

If patient preferences for a particular test are known to be highly variable—such as genetic testing for untreatable diseases or procedures that might have high out-of-pocket costs for a patient—more extensive dialogue is appropriate, regardless of the certainty of benefits and harms of a work-up.

When knowledge of the benefits or harms of diagnostic evaluation is highly uncertain or moderately certain evidence favours neither choice—a deeper, more detailed, and iterative shared decision making process becomes essential.

In some scenarios, such as in emergency care, high stakes and high levels of uncertainty are coupled with time pressure. In these scenarios shared decision making faces unique challenges and assumes even greater importance (see box on suspected stroke, p 194).

Centring diagnostic decisions around the patient has the potential to improve diagnostic safety and quality, and align diagnostic strategies with patient preferences. The growing science of patient reported outcomes may inform our understanding of how to best incorporate patient preferences into shared decision making for diagnosis. Recognition of the economics of diagnostic testing—and a better understanding of how these could be integrated with a patient-

<table>
<thead>
<tr>
<th>Function</th>
<th>Physician goals</th>
<th>Skills and techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship building</td>
<td>Build mutual trust and rapport with the patient</td>
<td>Appropriate patient interaction (eg, greeting, eye contact)</td>
</tr>
<tr>
<td></td>
<td>Discuss roles and responsibilities of all participants (including family)</td>
<td>Active listening</td>
</tr>
<tr>
<td></td>
<td>Respect autonomy and dignity of patient</td>
<td>Body language conveying openness and warmth</td>
</tr>
<tr>
<td>Information exchange</td>
<td>Understand the key medical and informational needs of the patient</td>
<td>Ask open ended questions</td>
</tr>
<tr>
<td></td>
<td>Appreciate the patient’s knowledge and beliefs about their health</td>
<td>Active listening</td>
</tr>
<tr>
<td></td>
<td>Share information in a manner accessible to and understandable by the patient</td>
<td>Repeat and summarise</td>
</tr>
<tr>
<td></td>
<td>Empower patients to better use and evaluate information sources</td>
<td>Have patient restate what they understood from the encounter</td>
</tr>
<tr>
<td>Responding to patient emotion</td>
<td>Recognise, understand, and empathise with the patient’s emotions</td>
<td>Provide explanations without jargon</td>
</tr>
<tr>
<td></td>
<td>Legitimate and validate expressed emotions</td>
<td>Encourage questioning</td>
</tr>
<tr>
<td>Shared decision making</td>
<td>Elucidate the patient’s needs, values, and preferences regarding care, including desired degree of involvement in decision-making</td>
<td>Joint agenda setting</td>
</tr>
<tr>
<td></td>
<td>Deliberate with patient about available options and evidence</td>
<td>Encourage patient participation in discussion</td>
</tr>
<tr>
<td></td>
<td>Reach mutual agreement about desired course of action</td>
<td>Active listening</td>
</tr>
<tr>
<td></td>
<td>Explore available options, including through the use of decision aids</td>
<td>Elicit patient goals and values</td>
</tr>
<tr>
<td></td>
<td>Accommodate patient preferences</td>
<td>Provide help in coping</td>
</tr>
<tr>
<td>Patient empowerment and self management</td>
<td>Enable patient autonomy, motivation, and self efficacy</td>
<td>Motivational interviewing</td>
</tr>
<tr>
<td></td>
<td>Provide guidance, skills, and access to health resources</td>
<td>Recommend and instruct patients through necessary steps</td>
</tr>
<tr>
<td></td>
<td>Advocate for and assist patient in navigating healthcare system</td>
<td>Elicit patient goals and values</td>
</tr>
</tbody>
</table>

LOW BACK PAIN

A 53 year old man presents with a week’s history of low back pain after lifting heavy furniture. After taking a history and physically examining the patient, the clinician finds no abnormal neurological signs. She recommends that he apply heat, sleep comfortably, and take over the counter analgesics as needed. The patient expresses worry and is uncomfortable that no further tests are performed. He requests magnetic resonance imaging of the back “just to be sure that nothing is wrong.”

Using best available evidence, the clinician uses patient centred care techniques (table 1) to discourage testing, explaining that the image is more likely to give false positive findings than to identify an important medical problem. The patient is visibly distressed and stops talking. The clinician invites the patient to express his concerns; he discloses that his sibling was recently diagnosed as having renal cancer, which first manifested with lower back pain.

**Discussion**

The general medical consensus is that, in the absence of neurological abnormalities, computed tomography and MRI are unnecessary for lower back pain and potentially harmful, given the small risks inherent with imaging plus the potential harms of downstream treatment for incidental findings.

The patient expressed a strong and repeated desire for further diagnostic testing, which might be based on values, knowledge, or past experiences that the clinician has not fully explored. The clinician should use shared decision making techniques to ensure that she is fully aware of what the patient understands about the nature of his pain, about the benefits and risks of imaging, and the patient’s underlying fears. This does not imply that diagnostic testing should be pursued—the end result of shared decision making must be to avoid imaging that is not medically indicated.

The aim is to further the conversation and make a decision based on a deeper exploration of the patient’s concerns. Although the clinician should discourage imaging procedures that are not based on evidence, the decision should reflect the specific preferences and needs of this unique patient. Learning about the recent diagnosis of renal cancer in a sibling might lead to an entirely different, jointly developed diagnostic plan, such as urinalysis and imaging of the kidneys if the urinalysis shows evidence of microscopic haematuria.
Table 2 | Key differentiating features of shared decision making for diagnosis

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Context</th>
<th>Shared decision making for treatment</th>
<th>Shared decision making for diagnosis</th>
<th>Considerations for the diagnostic encounter</th>
<th>Recommended action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s primary concern and goals of the encounter</td>
<td>How can I get better?</td>
<td>What is wrong with me?</td>
<td>Goals of the conversation are focused (largely) on determining causation, rather than finding solutions</td>
<td>Emphasise discussion of diagnostic possibilities and work-up strategy rather than prognosis or treatment for symptoms or underlying diseases</td>
<td></td>
</tr>
<tr>
<td>Timeline and process for decision making</td>
<td>Often compressed</td>
<td>Often iterative</td>
<td>A correct diagnosis often unfolds over several encounters over time. Shared decision making is necessarily iterative, with new information expected to influence later decision making</td>
<td>Clarify for the patient how you anticipate the diagnostic process will unfold and over how long. Define specific objectives for shared decision making at each encounter and defer further discussions until later, as appropriate</td>
<td></td>
</tr>
<tr>
<td>Endpoint of care process</td>
<td>Most appropriate treatment choice for that patient</td>
<td>Diagnostic uncertainty resolved sufficiently for that patient</td>
<td>Complete diagnostic certainty is rarely achieved. An endpoint occurs when the search for a specific diagnosis (or diagnostic confirmation) ends and the focus shifts to prognosis and treatment</td>
<td>Work with the patient to identify when they are ready to move away from diagnosis towards symptom or disease management. This will vary by disease and by patient preference</td>
<td></td>
</tr>
</tbody>
</table>

Evidenc

| Clarify of the problem space or formulation | Probabilistic | Ambiguous | The problem formulation is sometimes insufficient to present options or choices, let alone weigh risk-benefit probabilities | Express higher levels of uncertainty and discuss the patient’s overall health goals to determine shared goals. This should help guide overall strategy and choosing specific diagnostic tests or consultations |
| Decision tree complexity                 | Lower          | Higher     | The number of possible diseases (and test options) is usually very high. Discussing all medically reasonable considerations with the patient or family is impractical (and potentially overwhelming or frightening) | Reserve detailed shared decision making for specific diagnostic test choices that have high stakes and moderate uncertainty (fig 2). Use less time-intensive patient centred care strategies when stakes are low or recommendations clear |
| Proximity to patient centred outcomes and strength of evidence base | Greater          | Lesser     | The link between diagnostic strategy and patient centred outcomes is usually remote. The strength of evidence to guide choices is often low, requiring a two step inference about the benefit of diagnostic testing to the patient (For example, does a test accurately diagnose disease X? If so, is treatment Y beneficial in treatment of disease X?). This inference is weaker than a direct inference | Explain to the patient that identifying the cause of their symptoms might not lead to a treatment benefit. Discuss frankly the level of evidence that pursuing a diagnosis will lead to improved outcomes that matter. As appropriate, discuss overdiagnosis and incidental findings as potential harms from further diagnostic testing |
| Risk of medical error                    | Lower            | Higher     | Diagnostic errors are more common and harmful than treatment errors. Diagnostic decisions are upstream, so inherently more uncertain and prone to error than treatment decisions | Discuss uncertainty in diagnosis and the possibility of diagnostic error. Emphasise the patient’s role in prompt identification of misdiagnosis when red flags appear or the disease course deviates from the expected path |

Patient

| Psychology of clinical decision making | Risk-benefit trade-offs | Risk aversion | Clinicians often make decisions based on needing to know the cause first or ruling out the worst case scenario, without explicitly considering the downsides of further diagnostic testing or patient risk preferences | Discuss patient values surrounding missed opportunities to diagnose and treat. Discuss not only the potential harms from testing but also the potential for false positive test results |
| Burden of intervention to the patient in relation to their health outcome | Tightly coupled | Largely decoupled | Diagnostic testing generally offers no tangible (direct) benefit to patients, so, in some sense, it “all risk and no reward” | Discuss patient needs, values, and preferences specifically related to trade-offs between the burden of testing and resolution of diagnostic uncertainty or fears |
| Self efficacy and the role of internet searches and discussion groups | More effective | Less effective | Diagnostic information on the internet for patients with common symptoms is often unreliable, and relevance of other patients’ experiences with the same symptoms is likely lower than for those with the same disease | Identify websites with reliable diagnostic information or other resources (medical librarians, second consultation services). Discuss risks of using inadequately vetted internet information |

**We strongly recommend clinicians formalise protocols for use in emergency situations**

**SUSPECTED STROKE**

An 82 year old woman in hospital after surgery develops weakness on the right hand side and confusion. A brain CT rules out visible bleeding, and the emergency team want to give alteplase within the three hour window for suspected stroke.

The patient’s family agrees that, if she is having a stroke, they favour treatment with alteplase, but they are concerned she might not be having a stroke, but rather experiencing side effects from pain drugs. They ask for further testing (such as MRI) to minimise the possibility that she receives a high risk treatment for a highly uncertain diagnosis. These tests would delay giving alteplase, potentially missing the therapeutic window.

**Discussion**

Decisions in an emergency are fraught with complications. Here, scientific evidence puts pressure on the health team to give a potentially dangerous treatment as fast as possible; the needs, values, and family preferences are sometimes considered secondary or even an impediment. Yet, these situations can benefit from more intensive shared decision making. We strongly recommend that clinicians develop and implement formalised protocols for shared decision making in emergencies. This should include roles for clinical personnel and effective communication of risks and constraints.

**We strongly recommend clinicians formalise protocols for use in emergency situations**

We strongly recommend clinicians formalise protocols for use in emergency situations —— would help foster the routine use of shared decision making in diagnostic practice.

Zackary D Berger, associate professor of medicine, Johns Hopkins University School of Medicine, Baltimore zberger1@jhmi.edu

Justin P Brito, assistant professor of medicine, Mayo Clinic, Rochester, Minnesota

Naykky Smigh Ospina, assistant professor of medicine, University of Florida School of Medicine

Suraj Kannan, medical student, Johns Hopkins

Jeremiah S Hinson, instructor of emergency medicine, Johns Hopkins

Erik P Hiess, professor of emergency medicine, Mayo Clinic

Helen Haskell, Mothers Against Medical Error

Victor M Montori, professor of medicine, Mayo Clinic

David L Newman-Joker, professor of neurology, Johns Hopkins

Cite this as: BMJ 2017;359:j4218

Find the full version with references at http://dx.doi.org/10.1136/bmj.j4218
**LETTERS** Selected from rapid responses on bmj.com. See www.bmj.com/rapid-responses

### NHS LAND PLANS

**Selling NHS land is ludicrous financial idiocy**

Naylor and Chand debate plans to sell NHS land (Head to head, 30 September). The Naylor report recommends selling public land to private developers—who currently own between them enough land to build some 600,000 homes. The only reason to release public sector land is to increase profitability and to get private hands on prime central London property at knockdown prices. Naylor expects London to raise billions of pounds through this initiative.

This is another version of the private finance initiative, described as “perfidious financial idiocy” by a former editor of The BMJ. PFIs largely used private loans to build hospitals, contributing substantially to the NHS debt. The Naylor version is to sell land, best described as “ludicrous financial idiocy.”

Chand makes some salutary points—we need transparent accountability of public assets and better use of publicly owned assets without handing them over to privateers. Once it’s gone, it’s gone.

J S Bamrah, consultant psychiatrist, Manchester

Cite this as: BMJ 2017;359:j4895

### NHS property should stay with the NHS

The government is examining Naylor’s recommendation to raise money by selling properties that he calls “inefficiently used assets” (Head to head, 30 September). The NHS should find ways to use them efficiently instead of selling them to developers. I agree with Chand that services could be threatened and that public consultation is lacking.

Naylor says that developers could build affordable housing for NHS staff and could solve the housing shortage. The best way to provide affordable housing for NHS staff is for the NHS to use its own property—an option this plan would remove. The whole streets of property owned by local councils that are left standing empty for years should be used to reduce the housing crisis.

Can people believe the government’s assurance that all profits will be given back to the NHS? I can’t. NHS property should be left in the care of the NHS.

Jo Kirkpatrick, writer and editor, London

Cite this as: BMJ 2017;359:j4920

### LETTER OF THE WEEK

**A smoke-free world to protect child health**

Britton considers why smoking has yet to be effectively tackled, with focus on the behaviour of big tobacco companies (Editorial, 30 September). We agree that the costs are paid by the rest of society. Moreover, these costs are unevenly distributed across society, having a large effect on the health of children.

Tax increases on tobacco are key to reducing both smoking prevalence and inequalities, and the World Health Organization recommends that countries implement excise taxes of at least 70%. Many countries have done this, but, as Britton notes, the tobacco industry is powerful and inventive. One tactic to keep people smoking is to load tax increases onto premium brands and maintain the availability of cheaper alternatives. A recent study in 23 EU countries found that difference between median and minimum cigarette prices was associated with infant mortality. Furthermore, strong evidence links WHO’s tobacco control policies (MPOWER) to better child health outcomes. Evidence is strongest for smoke-free legislation, but all MPOWER measures could potentially avert harm to the next generation.

A world without smoking would have substantial benefits for child health. We must be alert to tobacco industry strategies to subvert public health gains from evidence based policies. Our growing understanding of the importance of strong tobacco control policies will hopefully convince governments to take the actions necessary to create the first smoke-free generation.

Joel Kirkpatrick, writer and editor, London

Cite this as: BMJ 2017;359:j4920

### LONG TERM STATINS

**Exaggerated reports of flawed statin study**

The BMJ reports on 20 year treatment with a statin in the WOSCOPS trial (This Week, 16 September). The news article and publication report that pravastatin reduced deaths from heart disease by 28% in men with high levels of LDL cholesterol. But the absolute risk reduction, which is more clinically relevant, was only 2.3%. Both the study and the news story focus on the more dramatic, but misleading, relative risk statistic.

The reported benefits are also unreliable. After the five year trial finished, the majority of people in the treatment group stopped taking their statin, and one third of people in the placebo group had started statins. Furthermore, the investigators did not monitor which participants were on a statin over the 15 years of follow-up.

Despite the sensational headlines, this study provides no guidance for clinicians seeking high calibre research on the long term effects of statins on coronary outcomes.

David Diamond, professor, Tampa

Malcolm Kendrick, general practitioner, Macclesfield

Luca Masciutelli, cardiologist, Udine

Cite this as: BMJ 2017;359:j4915

### Serious bias in follow-up of statin trial

The BMJ’s comment on the WOSCOPS trial (This Week, 16 September) says that total and cardiovascular mortality were considerably reduced at 20 years in men in the treatment group, particularly those with the highest concentrations of low density lipoprotein (LDL) cholesterol.

But the study has serious bias. At five years, only 38.7% and 35.2% of patients allocated to pravastatin and placebo, respectively, were taking statins, and no later data were available. Many patients stop taking statins; so is the mortality benefit due to statins or high LDL cholesterol?

A systematic review including 68,094 elderly people found an inverse association between all cause mortality and LDL cholesterol in 92% of participants. In the largest study, those with the highest LDL cholesterol lived longer than those taking statins.

One possible explanation is that LDL cholesterol...
participates in immune system responses by inactivating micro-organisms, and infections participate in the pathogenesis of cardiovascular disease.

Uffe Ravnskov, independent researcher, Lund
Harumi Okuyama, professor, Nagoya
Sherif Sultan, professor, Galway
Cite this as: BMJ 2017;359:j4906

TELEPHONE FIRST FOR GPs

Patient perspectives on telephone first system

Newbould et al have undervalued the adverse effects that patients experience and the hospital costs incurred with telephone first consultations in general practice (Research, 30 September).

A 6% immediate rise in hospital admissions for (potentially preventable) ambulatory care sensitive conditions is bad for patients. GPs are clearly less effective in telephone consultations.

Overall ratings by patients in the intervention group matter most. Despite a 20% gain in immediate access, the GP communication composite was significantly negative. The last thing NHS hospitals need is thousands more admissions, with an estimated cost of about £50m.

Newbould et al conclude “that a considerable part of the GP workload can be dealt with through phone consultations.” This statement could only be justified if telephone first led to outcomes as good as usual care, delivered at the same or lower cost, but their own findings show that they do not. The NAPP opposes this system.

Denis Pereira Gray, patron
Patricia Wilkie, president, National Association for Patient Participation (NAPP)
Cite this as: BMJ 2017;359:j4925

Telephone triage risks decision fatigue

Telephone triage might seem an attractive way to ensure that clinic time is prioritised for those who need it and to enable more patient contacts in limited time (Research, 30 September). But expanding numbers of patient contacts raise the risks of “decision fatigue,” impaired self regulation, and diminished quality of decisions.

General practice is already stretched to its limits, and this adds to the burden of decisions placed on doctors. More patient contacts, decisions, and complexity will lead to fatigue, resulting in attempts to simplify, delay, or defer decisions and in increased referrals or recalled patients.

Rising demands and decreasing resources, on a background of unsustainable ideals of professionalism, are leading general practice down the tracks of self destruction.

To protect professional quality and patient safety, the RCGP has a responsibility to openly question politically driven incentives that could further stress people and systems on the verge of collapse.

Cathy J Welch, GP, Isle of Arran
Cite this as: BMJ 2017;359:j4902

Duty of equality for people with disabilities

Offering patients a variety of means to contact GPs is wise (Research, 30 September). But using the telephone to screen patients could contravene the public sector duty of equality.

Every patient list will include people with hearing or speech problems or both. Lip reading, note taking, or signing is hard enough in a hurried GP surgery, but an initial telephone barrier could discriminate against thousands of patients.

Adults with learning disabilities are at high risk of exclusion from NHS services. The most recent Labour government developed several promising models of facilitation for primary care. But this stalled with the coalition government in 2010, and the Health and Social Care Act 2012 has led to fragmentation of services for people with disabilities.

GPs under pressure might not find it easy to weigh up their duty of equality. Perhaps they can keep in mind a duty of humanity for patients with disabilities.

Woody Caan, member, Action on Hearing Loss, Duxford
Cite this as: BMJ 2017;359:j4905

An industrial picture of nuclear weapons

McCartney makes the controversial claim that nuclear weapons never used still do harm (No Holds Barred, 16 September).

Strategic nuclear deterrents deter enemies from considering a first strike, based on the concept of mutually assured destruction. That nuclear weapons have not been used in the past 72 years can hardly be considered a harm. The cold war stayed “cold” because NATO and the Soviet Union both had credible nuclear arsenals.

McCartney and the nuclear disarmament lobby ignore that the UK’s Trident system provides ongoing employment for approximately 7000 people in Scotland and 30 000-60000 across the UK. This is not harmful.

McCartney refers to the £31bn cost of renewing Trident. New submarines will have service lives of 30 years or more, which must be considered. To abandon Trident now would be to put ideology before national security at a time when the international nuclear threat landscape is growing more hostile, not less.

Gee Yen Shin, consultant, London
Cite this as: BMJ 2017;359:j4965

Time to re-assess mutually assured destruction

The escalating crisis between the USA and North Korea (No Holds Barred, 16 September) illustrates the major problem with mutually assured destruction: it depends on a rational assessment of the risks of using nuclear weapons. This should lead to diplomacy, behaviours, and decisions calculated to avoid a catastrophic event. Such rational assessment currently seems lacking.

If nuclear weapons are used, the consequences fall mainly on civilians. In this sense, nuclear weapons are similar to biological and chemical weapons, which are banned under international law.

Dependence on mutually assured destruction may have helped to avoid global, although not regional, conflict since the second world war. But we need to re-assess. The risks are growing and are much greater than any deterrent benefit. The UK has an opportunity for global leadership. It could sign the treaty banning nuclear weapons agreed by 122 nations and adopted on 7 July 2017 at the UN.

John C M Gillies, professor, University of Edinburgh
Cite this as: BMJ 2017;359:j4917

The nuclear Trident system provides employment for up to 40 000 people
Jon van Rood

Immunohaematologist who helped to map the human leucocyte antigen system

By 1957 van Rood was head of the immunohaematology department. This was an era of pioneering global research: French immunologist Jean Dausset (BMJ 2009;339:b3051) identified the first white blood cell antigen in 1958, and in the same year van Rood published research in Nature, which showed some pregnant women had antibodies directed against the white blood cells of their children’s fathers, as well as to transfusion donors.

A former colleague and professor in the immunogenetics of transplantation, Frans Claas, explained that this was the start. While blood transfusions contained mixtures of antibodies whose trigger could not be identified, “in pregnancy you normally have just one father—that is the trigger, you can always go back to the one who induced the antibodies.”

Van Rood then set about analysing the reactivity of the blood serum of thousands of women who had given birth. Then, with the help of an early computer, he began to group them into patterns. Together with researchers from around the world he began to map out the complex HLA system. By 1962 his work had appeared in his PhD thesis on leucocyte grouping.

Kidney transplants

Van Rood saw the application of the HLA system not just to blood transfusions, but also to the nascent attempts at kidney transplants. He travelled to transplantation centres around the world, asking to type donors and recipients, discovering that the more similar the HLA types, the greater the likelihood of success.

It became clear that antigens were not restricted to leucocytes but were expressed widely, such as in blood platelets and kidneys. In order to promote a degree of international consensus, van Rood invited researchers to Leiden to analyse the serological reactions. This second international histocompatibility testing workshop in 1965 laid the scientific groundwork for providing better matches in transplantation medicine and blood transfusions.

The next year van Rood worked on the first kidney transplantation in the Netherlands and in 1968 on the first successful bone marrow transplantation in Europe.

International organ donation

Once the science had revealed the requirements for compatibility, van Rood was able to widen the donor base. In 1967 he established Eurotransplant, the first and largest international organ donation organisation. Today, eight countries are involved, embracing a population of 135 million. Van Rood would help to establish the Netherlands centre for stem cell donors—Eurodonor, today known as Matchis—in 1988, and Bone Marrow Donors Worldwide in 1986.

He became director of Leiden’s immunohaematology department and cofounded its Institute for Immunology. He received dozens of awards and honours, with one exception. When in 1980, Baruj Benacerraf, Jean Dausset, and George D Snell were awarded the Nobel prize for physiology and medicine for their work on the HLA system, many thought his name should have been included.

Van Rood leaves his wife, Sacha, Baroness van Tuyl van Serooskerken; three children; and six grandchildren.

Tony Sheldon, Utrecht
tonysheldon5@cs.com

Cite this as: BMJ 2017;359:j4152
Should we abandon the four hour waiting time target?

Last week in The BMJ three consultants debated the question of whether we should scrap the target of a maximum four hour wait in emergency departments (BMJ 2017;359:j4857). Here’s what you were saying on Twitter:

I think it would be better to look at patient outcomes and satisfaction Anne @indydobbs

It’s an arbitrary target set by political diktat. It encourages manipulation of statistics and fuels demand on an over-pressured system Jonathan Harte @EvilGP

Targets like the one hour septic six are far more useful. The four hour target is public and politician friendly but actually bad for medical care Martin Whyte @MartinWhyte

Absolutely not. Bad flow is bad for departments and therefore patients Robert Golding @DrRgoldi

Unrealistic for many patients in today’s underfunded, exit-blocked emergency departments Kate Clayton @theraumajunkie

An hour is more than long enough for some frail elderly patients. Four hours was voter acceptable, that’s all. It’s been mostly a good thing Dyfrig Hughes @DyfrigH

IT’S been unachievable for a while now. The fines and the penalties should go with the four hour wait #stophetheclock

The target creates time centred care not patient centred [care]. Departments shuffle patients to meet times, this reduces care and patient flow waiting/space.tabtime/space.tabtarget?

Four hour targets make us lose sight of the real outcome: reduced mortality and morbidity Mark Luciani @mhluciani

It’s been unachievable for a while now. The fines and the penalties should go with the four hour wait

The target creates time centred care not patient centred [care]. Departments shuffle patients to meet times, this reduces care and patient flow waiting/space.tabtime/space.tabtarget?

Four hour targets make us lose sight of the real outcome: reduced mortality and morbidity Mark Luciani @mhluciani

FROM THE ARCHIVE

The terror of television

Children (and adults) this week may be recovering from an overindulgence of sugar at Halloween, but in 1992 the nation was recovering from something much more eerie. On 31 October the BBC’s broadcasting of the drama Ghostwatch, a ghost story shot in a documentary style, drew thousands of complaints, with some viewers believing it was real. A year later The BMJ accepted a case study (BMJ 1994;308:389) of two 10 year old boys who were referred separately to the child psychiatry unit at Gulson Hospital in Coventry. Post-traumatic stress disorder was diagnosed in both patients and the authors note that “the trauma in our two cases had been caused by the television programme the boys had watched”—Ghostwatch.

In the first case, the boy had been “frightened by Ghostwatch and had refused to watch the ending. He subsequently expressed fear of ghosts, witches, and the dark, constantly talking about them and seeking reassurance. He suffered panic attacks, refused to go upstairs alone, and slept with the bedroom light on. He had nightmares and daytime flashbacks.”

In the second case, “immediately after watching Ghostwatch this child, also described as a worrier, had complained of being frightened. He had felt sick and refused to go into his bedroom, complaining of someone watching him there. He was consequently allowed to sleep in his parents’ room, where he talked excessively about his fears.”

Both cases were treated with relaxation techniques and the management of anxiety, and the authors reported that the patients improved. The authors contended that this may be a new phenomenon, as “post-traumatic stress disorder from watching a television programme has not been reported previously.”

Other readers wrote in with similar tales (BMJ 1994;308:714), with one group of doctors saying that they had “recently seen four children with symptoms apparently precipitated by television programmes”—in their cases it was Ghostwatch and Casualty. “The diagnosis and aetiology of prolonged psychological reactions after television programmes seem to require further debate,” they suggested.