

smoking and was unlikely to be affected in the future. Despite hardcore smokers' recalcitrance, the authors say that targeted interventions could help older and socially disadvantaged smokers to quit.

## Promising new technologies for heart failure are available

The annual mortality from chronic heart failure remains as high as 40%. In this week's clinical review, Chow and

colleagues (p 1073) discuss the effects of new pacing technologies on patients with chronic heart failure. They report that the use of biventricular pacing improves symptoms and reduces the number of hospital admissions and lengths of stay. Implantable defibrillators reduce mortality, and forthcoming data from randomised controlled trials suggest that a wider range of patients should receive them. The authors outline the characteristics of patients who could benefit from these technologies and the complications that might arise.

### POEM\*

#### The optimal serum digoxin concentration in men with stable heart failure in sinus rhythm is 0.5 to 0.8 ng/ml

**Question** What is the optimal serum digoxin concentration for men with heart failure?

**Synopsis** Recent findings from the Digitalis Investigation Group (DIG) trial suggest strongly that only men with heart failure benefit from treatment with digoxin. In this post hoc analysis of data from the original three year randomised controlled double blinded trial (conducted in outpatient clinics), the authors assessed variations in serum digoxin concentration (SDC) and their associations with mortality. Findings from other studies have suggested that lower SDCs may lead to a reduction in mortality. Men were clinically stable with a left ventricular ejection fraction of 45% or less and were in sinus rhythm. Blood samples were drawn at least six hours after their previous digoxin dose. Men assigned to digoxin therapy were divided into three groups based on their SDC. Outcomes were assessed by individuals blinded to treatment group assignment. Of the 1171 men with SDCs assessed at one month, 572 (49%) had an SDC of 0.5 to 0.8 ng/ml, 322 (27%) had an SDC of 0.9 to 1.1 ng/ml, and 277 (24%) had an SDC of 1.2 ng/ml or higher. Men with an SDC of 0.5 to 0.8 ng/ml had a 6.3% lower mortality rate compared with men taking placebo. There was no associated reduction in mortality among men with SDCs of 0.9 to 1.1 ng/ml. However, men with SDCs of 1.2 ng/ml and higher had an 11.8% increased mortality rate compared with men in the placebo group. The association between higher SDC and increased mortality persisted after adjustment for potentially confounding variables.

**Bottom line** The optimal serum digoxin concentration at one month in men with stable heart failure in sinus rhythm is 0.5 to 0.8 ng/ml. Higher concentrations are associated with either no reduction or an increase in mortality.

**Level of evidence** 1b (see [www.infoPOems.com/resources/levels.html](http://www.infoPOems.com/resources/levels.html)). Individual randomised controlled trials (with narrow confidence interval).

Rathore SS, Curtis JP, Want Y, Bristow MR, Krumholz HM. Association of serum digoxin concentration and outcomes in patients with heart failure. *JAMA* 2003;289:871-8.

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\* Patient-Oriented Evidence that Matters. See editorial (*BMJ* 2002;325:983)

## Editor's choice

### Need good results? Fiddle them

Don Berwick—one of the world's leading thinkers on improvement in health care and a friend of mine—tells a story that illustrates how data on performance can mislead. He was responsible for quality assurance in a hospital. The radiology department had spectacular results. Patients waited hardly a moment. Everybody was satisfied. Why did the department do so well? Don wanted to find out and encourage the department to share its learning. "How is it," he asked the director, "that you get such good results?"

"Simple," she answered, "we make them up."

I was reminded of this story as I read the results of a BMA survey that showed how hospital trusts had poured scarce resources into accident and emergency departments during the week when performance tests were conducted (p 1054). Some even cancelled operations in order to free up beds to speed up admissions. The result was a huge rise in the number of patients treated quickly.

It's unsurprising that people play the system when the results have consequences. Fail to meet your targets and you may be sacked. Meet them and your hospital might become eligible to be a "foundation hospital" with extra resources and freedoms. Only a fool would not game the system, but the result is that we are all fooled (news extra on [bmj.com](http://bmj.com)). Sticks and carrots are distributed not on the basis of true, consistent performance but on the ability of people to "do well" that week, perhaps at the expense of other weeks and other services.

But a maxim of management is that "if you can't measure it you can't manage it." Otherwise, you make a change and you've no idea whether things are better or worse. (We've experienced this problem at the *BMJ* with our attempts to improve our decision making times.) Thus improvement experts like Don Berwick argue that "measurement should be used for learning not judgement." Another complication was identified by Albert Einstein: "Not everything that can be counted counts and not everything that counts can be counted." (We understand this as well at the *BMJ*, where, if we are not careful, profit—which can be counted—overrides influence, which cannot.)

I can understand, however, how all this sounds pathetic to a red blooded politician like Alan Milburn, Secretary of State for Health. He's putting millions into the National Health Service—and he needs results not only to get his party re-elected but also because he has the men from the Treasury pursuing him relentlessly. (Those boys—sexism intended—are not interested in anything you can't count.) Further, the public wants to know. The trick is to produce some data on performance that are meaningful but still leave lots of room for measurement for learning. Britain's cardiothoracic surgeons have had a go (p 1053), and any surgeons who are "below average" can be consoled by the thought that the extremely powerful force of "regression to the mean" is on their side—and that no politician understands its power (p 1083).

Richard Smith *editor*

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