

using the first group as the study group and the second as the control group the refined breast cancer mortality was calculated for the two groups.<sup>8</sup> A similar study of women aged 50-69 years is under way.

The ideal instrument for evaluating a screening programme is a mass screening register that contains data on each individual's screening history. A mass screening register is now in place in Finland and Norway, and the estimates of the effect of their screening programmes are eagerly awaited.

The only problem with the study by Blanks et al is that although it provides a point estimate for the reduction in breast cancer mortality and the range for that estimate, we cannot, because of the source of the information, be completely sure whether the estimate is biased and thus whether the goal of the screening programme has been achieved. One of the advantages of their study is that they tried to separate the effect of screening from other factors, such as increased awareness in the population and advances in treatment. Blanks et al estimated the effect of other factors including treatment at 14.9%. An interesting question is how much of that can be attributed to treatment alone.

Both the results from Finland and from England and Wales indicate that in practice a screening programme can have an effect on mortality that is

similar to that found in randomised controlled trials. However, the results have to be interpreted with caution and more studies are needed.

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## Treating non-ulcer dyspepsia and *H pylori*

*It is economically and clinically sensible but it won't make most patients better*

**H***elicobacter pylori* is the main cause of duodenal and gastric ulcers. The organism has also been linked to gastric cancer.<sup>1</sup> Most researchers believe that there is a relation, although an imperfect one, between non-ulcer dyspepsia and infection with *H pylori*. The pathophysiological mechanisms by which the infection may cause dyspepsia are unclear, but may include changes in acid secretion, abnormal motility, or altered visceral perception.<sup>2</sup> The prevalence of *H pylori* is higher in patients with non-ulcer dyspepsia than in healthy controls.<sup>3</sup> A pivotal question is whether curing the infection leads to a sustained improvement in symptoms in patients with non-ulcer dyspepsia. The controversy surrounding this issue is addressed by the meta-analysis by Moayyedi et al in this issue of the journal (p 659).<sup>4</sup>

Dyspepsia is defined as pain or discomfort in the central upper abdomen which originates in the upper gastrointestinal tract.<sup>5</sup> To make the diagnosis of non-ulcer (functional) dyspepsia patients need to have had symptoms for at least 12 weeks and the presence of an organic disease, such as a peptic ulcer or oesophagitis, must be ruled out. The investigation of choice is endoscopy of the upper gastrointestinal tract. As such non-ulcer dyspepsia can be referred to as investigated dyspepsia, which should be distinguished from uninvestigated dyspepsia. About 20-40% of patients whose dyspepsia is investigated will have gastro-oesophageal reflux disease, up to 10% will have gastric or duodenal ulcers, and a small percentage of patients

will have other diagnoses. Up to 60% will be diagnosed with non-ulcer dyspepsia.<sup>6</sup>

Moayyedi and colleagues carried out their systematic review as part of the Cochrane collaboration. Twelve studies met the strict entry criteria and were pooled for meta-analysis. One of the difficulties in appraising trials of non-ulcer dyspepsia is the diversity of outcomes used to measure improvement in symptoms.<sup>7</sup> The authors converted the results of individual trials to a dichotomous outcome measure in which patients were either categorised as improved (symptoms resolved or only mild symptoms remained) or not improved. A small (8%) but significant benefit was seen to favour patients who had been randomly allocated to treatment to eradicate *H pylori*: 36% in the eradication group versus 28% in the placebo group (relative risk reduction 9%, 95% confidence interval 4% to 14%). The number of patients who needed to be treated to cure one patient of dyspepsia symptoms was 15.

The authors also performed a cost effectiveness analysis using figures from the NHS. Treatment to eradicate *H pylori* was compared with treatment with antacids, which was chosen as the cheapest treatment for comparison. Treatment to eradicate *H pylori* would cost an extra £56 (\$84) for each additional month that patients were free from dyspepsia. This is a conservative estimate of cost because patients would not continue using antacids, which are often ineffective, if their symptoms persisted. H<sub>2</sub> blockers or proton pump inhibitors would probably be prescribed, and they are more

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expensive. Furthermore, the economic analysis only assessed costs over 12 months. If dyspepsia is cured further savings will accrue in later years. Several economic decision models have shown that there is an economic advantage to the eradication of *H pylori*.<sup>8-10</sup>

The meta-analysis by Moayyedi shows that there is a small but definite benefit to treating patients who have non-ulcer dyspepsia for *H pylori* infection. In practice the benefits of treating patients who are infected with *H pylori* are likely to be greater. Family physicians commonly manage patients with uninvestigated dyspepsia, some of whom will have peptic ulcer disease that can be cured by eradicating *H pylori*. The lifetime risk of developing ulcers for people who are infected with *H pylori* is 5-15%.<sup>11</sup> There is an expectation that treating patients who have *H pylori* will prevent them from developing gastric cancer, although there are no data from randomised trials to support this. A recent randomised clinical trial of 294 patients with uninvestigated dyspepsia in Canada found that treatment resulted in a sustained improvement in symptoms at 12 months in 50% of the patients treated to eradicate *H pylori* compared with 36% in the placebo group.<sup>12</sup> This result was significant, and seven patients needed to be treated to cure one patient. The trial also showed that treatment was cost effective.<sup>12</sup>

How should a family physician manage patients who have uninvestigated dyspepsia and are considered to be at a low risk for gastric cancer?<sup>13</sup> The 20-40% of patients presenting with the dominant symptoms of heartburn and acid regurgitation can be confidently diagnosed as having gastro-oesophageal reflux disease and treated for it. Although the definition of dyspepsia used in clinical trials dictates that patients with gastro-oesophageal reflux disease are excluded, most general practitioners consider reflux symptoms to be part of dyspepsia.<sup>13</sup> Assuming there is no reflux or symptoms that would make a doctor suspicious that more serious disease was present and if the patient is younger than 50-55 years old (above this range the risk of gastric cancer starts to increase) the patient should be tested for *H pylori* with a non-invasive test such as the urea breath test or a serological test.<sup>13</sup> If the test is positive the patient should be treated. However, 50-70% of

these patients will continue to have symptoms of dyspepsia after the infection has been cured and they will need additional treatment.

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## Clinical ethics committees

*They can change clinical practice but need evaluation*

Research ethics committees, both local and for multicentre research, are now well established in the United Kingdom. Clinical ethics committees, which deal with issues that arise in clinical practice, are a more recent phenomenon. Earlier this year people from 14 clinical ethics committees within the United Kingdom met to compare their experiences—at a time when the pressure for such committees, or other mechanisms for dealing with the ethics of everyday practice, is growing.

The first clinical ethics committees in the United Kingdom developed for a variety of local reasons. Some were an institutional response to one or two problem cases. Others developed because a few

clinicians were particularly concerned with, and interested in, the ethical aspects of clinical practice. Now that medical ethics is part of the core of medical education,<sup>1</sup> and with the high profile of medical ethics in the media, clinicians are increasingly aware of the ethical dimensions of practice. The medical profession is also under mounting pressure to ensure high standards of ethical practice. Inevitably, this will mean developing clear processes for determining and assessing those ethical standards. Clinical ethics committees at the level of NHS trusts, health authorities,<sup>2</sup> and primary care groups are likely to play an important part. Professional bodies will want such processes to be in place; the courts may consider them a part of due