the publication of clinical data on provider organisations. On the whole, these studies have found that published clinical indicators rarely stimulate quality improvement. ¹⁻³ Our findings indicate several reasons why published clinical indicators often have little or no effect in provider organisations. A key lesson of the Scottish experience is that those responsible for designing clinical indicator systems should not only concentrate on developing robust datasets with but should also encourage a suitable organisational environment and incentive context to foster the use of these data for continuous quality improvement.

We thank the interviewees, who without exception readily gave up their valuable time to share with us their knowledge of the CRAG indicators. We are grateful to Peter Smith and Huw Davies for their comments on an earlier draft of this paper. We also thank David Clyne and Steve Kendrick for their assistance with this project.

Contributors: RM was principal investigator and is guarantor of the paper. RM and MG designed the study. RM conducted the interviews and performed the preliminary qualitative analysis. MG read a sample of interview transcripts and helped to interpret the data. Both authors contributed towards the final paper.

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Competing interests: None declared.

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What is already known on this topic

Current policy on performance assessment in England and Wales places a great deal of emphasis on the collection and dissemination of clinical information

Dissemination of clinical outcome data has had limited impact on the behaviour of provider organisations in the United States

What this paper adds

Research in Scottish trusts suggests that clinical indicators are rarely used to stimulate quality improvement or share good practice

The reasons for low impact include internal factors relating to the properties of the indicators and external factors within the organisational environment in which the data are used

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Declaring financial competing interests: survey of five general medical journals

Amina Hussain, Richard Smith

Although many authors of biomedical journal articles have financial competing interests, they often fail to disclose them. 1-3 Editors have been concerned about this for a long time. In 1985, the International Committee of Medical Journal Editors produced a statement on conflicts of interest, and journal editors adopted individual policies. 4 But how effective have their policies been in practice?

Krimsky et al investigated the financial interests of over 1000 authors whose articles appeared in 14 scientific and medical journals in 1992.3 Although 15% of authors had financial ties relevant to one of their publications, no voluntary disclosures were published. In 1998, Stelfox et al showed that 23/24 authors (96%) defending the safety of calcium channel antagonists had financial ties with manufacturers of these drugs compared with 11/30 (37%) who were critical of their use. Only 2/70 articles disclosed the authors' potential conflicts of interest. These findings confirmed that little had been achieved since initial concerns had been raised over a decade earlier. Recently, however, editors have been paying more attention to the issue and urging authors to declare competing interests. This study aimed to find out whether more authors have been doing this.

Methods and results

Using random number tables, we selected six sample issues of five leading medical journals (*Annals of Internal Medicine, BMJ, JAMA, Lancet,* and *New England Journal of Medicine*) from each of four years: 1989, 1994, 1996, and 1999. All editorials, papers reporting original research, and letters were examined to see if they contained a statement declaring authors' potential financial competing interests (this did not include statements that only mentioned the funding source). We also examined each journal's written policy on financial competing interests (see the *BMJ*'s website).

We studied 3642 articles, 52 (1.4%) of which declared authors' competing interests: two articles in 1989, eight in 1994, four in 1996, and 38 in 1999. The papers section had the greatest proportion of declarations (23/656; 3.5%), followed by editorials (7/412; 1.7%), then letters (22/2574; 0.9%) (table).

Comment

After much delay, there are now signs of a small, but increasing, proportion of articles declaring competing interests in some journals. Variations in policy requireBMJ, London WC1H 9JR Amina Hussain Clegg scholar Richard Smith editor

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Written policies on each of the five journals are available on the BMJ's website Proportion of articles in five medical journals with financial competing interest statements. Values are numbers (percentages)

Sample year	Annals of Internal Medicine	BMJ	JAMA	Lancet	New England Journal of Medicine
1989	0/13	0/23	0/8	0/33	0/14
1994	0/13	0/33	1/11 (9)	0/35	0/17
1996	0/12	0/32	0/12	0/40	0/11
1999	1/10 (10)	2/30 (7)	3/11 (27)	0/40	0/14
Total	1/48 (2)	2/118 (2)	4/42 (10)	0/148	0/56
Papers (n=656):					
1989	0/28	0/51	0/26	0/26	2/23 (9)
1994	0/39	0/45	2/24 (8)	0/37	0/26
1996	0/36	1/51 (2)	0/24	0/34	0/26
1999	0/33	8/37 (22)	6/27 (22)	0/37	4/26 (15)
Total	0/136	9/184 (5)	8/101 (8)	0/134	6/101 (6)
Letters (n=2574):					
1989	0/71	0/172	0/101	0/262	0/120
1994	0/86	1/176 (<1)	4/82 (5)	0/211	0/131
1996	0/66	0/167	3/85 (4)	0/205	0/113
1999	0/63	8/139 (6)	5/82 (6)	1/129 (<1)	0/113
Total	0/286	9/654 (1)	12/350 (3)	1/807 (<1)	0/477

ments may account for the disparity among journals. For instance, the lack of declarations in New England Journal of Medicine editorials is not surprising as the journal (not always successfully2) prohibits them being written by authors with financial ties. The Lancet's in-house editorial team always writes the first editorial of each issue, signing it "The Lancet," a style that makes it impossible to know whether contributing authors have competing interests. But subsequent editorials conform to the more common format of naming individual authors at the end of the article, making it possible to request, and thus publish, details of each author's competing interests. The greater proportion of declarations in JAMA editorials may reflect the journal's longstanding policy of requiring authors to sign documents declaring any financial competing

interests. The proportion of declarations in *BMJ* papers was much greater in 1999 than 1996. This may reflect the journal's adoption, in 1998, of Stelfox's recommendations requiring authors to answer a series of short questions on their financial ties.⁵

Data in this study have been drawn from information published in journals, and not directly from what authors revealed to editors. There is potential for disparity here, but it is difficult to see why editors would decide against revealing competing interests that were disclosed to them, given what is clearly stated in their policies.

Editors can learn much from examining the policies of other journals and adopting the features that seem conducive to disclosure. Research is needed to verify whether some of the authors who had not made a declaration did in fact have undeclared financial competing interests when they wrote their articles. It would also be useful to know the impact, if any, of competing interest statements on readers.

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Contributors: AH designed the study, collected the data, and wrote the paper. RS proposed the idea for the study, discussed the interpretation with AH, and corrected the manuscript. AH is guarantor.

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Competing interests: RS is the editor of the *BMJ* and responsible for devising its policy on competing interests. He is paid a fixed salary and will not be affected financially by the success or failure of the policy on competing interests.

This study was peer reviewed in the normal way, except that RS played no part in the process.

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Effect of *Helicobacter pylori* infection on blood pressure: a community based cross sectional study

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Many studies have reported an association between *Helicobacter pylori* infection and an increased risk of cardiovascular disease. The strength of the association has been hard to judge because of the varied methods of the studies and substantial heterogeneity of the findings. Mechanisms that may contribute to this association include abnormalities in the levels of certain blood proteins (for example fibrinogen or C reactive protein) secondary to the chronic infection and raised blood pressure in people infected with *H pylori*. The chronic infection in the levels of the chronic infection in the proposition of the protein in the levels of the chronic infection.

There are several methodological difficulties in carrying out studies to determine whether *H pylori* infection results in raised blood pressure. We have attempted to minimise such problems in a large prospective community based study of the association between *H pylori* infection and blood pressure.

Methods and results

The Bristol helicobacter project is a community based study centred on the northeastern suburbs of Bristol. The primary aims of the study are to assess the effects of *H pylori* infection (and its eradication, on a double blind basis) on digestive symptoms and their treatment and on various other aspects of health and quality of life. We have measured blood pressure prospectively in people who were recruited into this study and whose helicobacter status and other risk factors for raised blood pressure were known.

Of the 10 537 subjects enrolled in the project, 1634 (15.5%) were positive for H pylori infection on a $^{13}\mathrm{C}$ -urea breath test, using 100 mg $^{13}\mathrm{C}$ urea with a standard orange juice and citric acid test meal and a cut off of 3.5 δ $^{13}\mathrm{C}$ per ml. Blood pressure was measured with a