

compliance. Improved management may reflect heightened awareness by black people and healthcare professionals to the risks of stroke.

#### Possible confounding and bias

One confounding factor may be the differences in case mix between groups. We adjusted for previous activity of daily living, Glasgow coma score, acute urinary incontinence, and swallowing deficits. There is still the potential for residual confounding.

A possible cause of bias could have been if the register had missed either the more mild strokes in white people or the more severe strokes in black people (or both). When we allowed for differences in case ascertainment, the differences in three month mortality remained; thus we can be reasonably sure that the black mortality advantage seen here is not due to ascertainment bias (see [bmj.com](http://bmj.com)).

The south London register has observed an increased risk of stroke but improved survival for most groups within the black population. After controlling for sociodemographic, case severity, and healthcare interventions we found a residual unexplained overall survival advantage in the black group. This requires more detailed description of case mix and stroke subtype, including aetiological subtype, investigation of a healthy migrant population, and care after stroke.

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Competing interests: None declared.

Ethical approval: Ethical approval was from the ethics committees of Guy's and St Thomas' Hospital Trust, King's College Hospital, Queen Square, and Westminster Hospital.

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### What is already known on this topic

The risk of stroke and mortality from stroke are higher in black ethnic groups compared with white groups

Analysis of survival after stroke between ethnic groups has rarely controlled for differences in socioeconomic status, management of pre-morbid risk factors, case mix, or acute management

### What this study adds

Black people with good mobility before a stroke and older black people have a substantial survival advantage over similar white people

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## Systematic review of publication bias in studies on publication bias

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Publication bias is a well known phenomenon in clinical literature,<sup>1,2</sup> in which positive results have a better chance of being published, are published earlier, and are published in journals with higher impact factors. Conclusions exclusively based on published studies, therefore, can be misleading.<sup>3</sup> Selective under-reporting of research might be more widespread and more likely to have adverse consequences for patients than publication of deliberately falsified data.<sup>1</sup> We investigated whether there is preferential publication of positive papers on publication bias.

### Methods and results

We identified studies that assessed the impact of publication bias in Medline (January 1993 to October 2003)

using the search terms "publication bias", "citation bias", "language bias", "location bias", "reference bias", or "multiple publication bias". We also searched the references of a Cochrane review on publication bias.<sup>4</sup> We restricted the search to publications that primarily investigated publication bias and whose acceptance therefore might have depended on whether they had found publication bias or not. We retrieved 265 references. Of these, we chose 148 for full examination. Their bibliographies yielded 26 additional papers. We

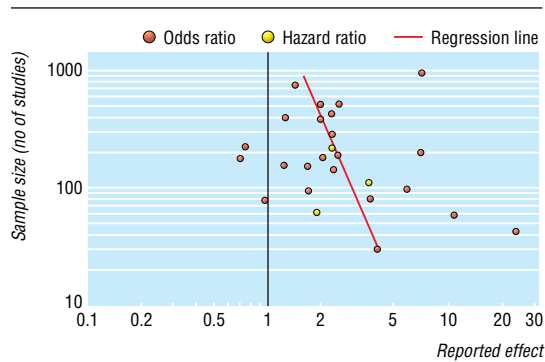
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References for the 26 studies are on [bmj.com](http://bmj.com)

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Funnel plot of 26 reports on publication bias, with reported effect as dependent variable

excluded 148 studies because they gave no original data. All remaining 26 were included in the analysis (see [bmj.com](http://bmj.com)).

We used a funnel plot to evaluate reports for publication bias. In a funnel plot the effect size is plotted versus a measure of its precision, such as sample size. With increasing sample size, random variations of the effect are smaller. Thus, data from several studies are expected to be symmetrically distributed in a funnel shaped area of the plot if no publication bias is present. Conversely, an asymmetrical funnel plot indicates a biased study sample.<sup>5</sup>

We plotted effect size versus sample size (figure). The effect is the ratio of the odds of a positive study being published to the odds of a negative study. We transformed reported relative risks into odds ratios. We did not transform hazard ratios. The vertical line indicates no publication bias; 23 of 26 studies report preferred publication of positive results.

The median reported odds ratio is 2.3, indicating preferred publication of positive results. The sloping line results from a regression with the reported effect as dependent variable. Its slope does not differ significantly from zero ( $P = 0.13$ )—that is, the asymmetry of the data is not statistically significant.

## Comment

We found no evidence of publication bias in reports on publication bias. But, with just 26 studies, the

power to detect asymmetry in a funnel plot was low.<sup>5</sup> Furthermore, the definition of the terms “positive” and “significant” is non-uniform and sometimes rather arbitrary in the studies reinvestigated here. For example, Dickersin (see [bmj.com](http://bmj.com)) used the definition “studies reported to have statistically significant findings were combined with those reported to have findings of great importance. Together they are referred to as ‘significant’ and are contrasted with the remainder, which are referred to as ‘not significant.’”

Most data on publication bias were recorded retrospectively and lack prospective registration, as does the present analysis. Prospective and registered studies on publication bias are needed.

### What is already known on this topic

Studies estimated to have publication bias seem more likely to be published at all, earlier, and in journals with higher impact factors; as a consequence effects are often overestimated

### What this study adds

These findings do not indicate publication bias in reports on publication bias

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Ethical approval: Not needed.

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## A memorable doctor

Alastair Short was my trainer in general practice. Tragically, he died in a climbing accident, but I had occasion to find myself reflecting about him recently. On entering my consulting room, I found my next patient sitting behind the desk in what could be considered “my chair.” I recalled a time over coffee when Alastair had laughingly told us of a similar experience that he had had.

Without drawing the patient’s attention to what could otherwise have been a potentially embarrassing situation, he conducted the consultation from what would normally be the patient’s chair. Alastair told us that it had given him a different perspective on the role of the patient—patient’s hopes, fears, and expectations became just that little bit easier to appreciate.

I remember at the time dismissing his comments—perhaps because I was concerned that the removal of the “security blanket” of my familiar domain could expose some inherent weakness or perceived loss of status. However, when faced with the same situation myself, it made sense to carry on in the “reverse positions.” Alastair was right: the consultation went well, and the patient left seemingly contented.

This experience taught me two valuable lessons. Firstly, that we sometimes need to shake ourselves out of the repetitive, rote nature by which we work, even if only briefly. Secondly, in an ever more demanding environment in medicine the expectations of the patient remain paramount.

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