Sirs,

A law banning the use of mobile phones whilst driving was passed in the UK and went into effect on 1 December 2003. A study demonstrated that within 10 weeks of enforcement of the new law, mobile phone usage while driving fell from 1.85 to 0.97% across three different sites around Birmingham. A correspondence in response to this study referred to a similar study conducted in New York, in which although the same sort of post-legislation drop was reported, the figures were then found to return to pre-legislation levels within a year. Thus, as a follow-up to the study conducted in Birmingham, we aim to assess the longer-term impact of the legislation 2 years on from its implementation.

To ensure continuity, we replicated all contexts used by Johal et al. in our study. The same three sites were used: a traffic-light T-junction (A), a pedestrian crossing (B) and a roundabout (C). Samples were taken on four consecutive Tuesday evenings between 17:00 and 18:00 hours in October. The results are shown in Table 1—the table also shows the results from the previous study, 10 weeks before and 10 weeks after the legislation was enforced.

Our new data show statistically significant rises in the rate of mobile phone usage at two of the three sites since the previous study. The overall rate of mobile phone usage from this data is 1.63%, demonstrating an increase of mobile phone usage back to nearly pre-legislation levels. This is very much in keeping with the results of the New York study of 2004 as well as with anecdotal evidence within the UK itself. The apparently anomalous findings in relation to site B are most likely to be explained by the introduction of another road safety measure, speed cameras, a few hundred yards before the observation point, after the original survey. This may well have resulted in drivers’ feeling the need to behave better in other respects concerning road safety.

As mentioned by Paul Pilkington in his correspondence to the initial study, the reasons for the decreasing compliance could be 2-fold. Firstly, after a brief period of compliance, drivers are judging the risk of ‘getting caught’ as minimal and hence returned to using mobile phones whilst driving due to lack of enforcement of the law. Secondly with publicity of the risks of using mobile phones whilst driving diminishing so soon after the legislation, people are forgetting or downplaying these risks and dangers.

Without the fear of being prosecuted, this law has been shown previously and on this occasion to be ineffective. Calls for greater enforcement of this law and improved publicity and education are hence the required course of action. We may also benefit from new measures proposed in the UK Road Safety Bill (yet to be passed) seeking to increase the penalty for using a mobile phone while driving from £30 to £60 plus three penalty points. The idea of ‘on-the-spot’ fines may also act as a deterrent. It is evident that although the current legislation has certain level of potency, it is very much short-lived and is hence in need of such measures to reduce mobile phone usage whilst driving.

**Contribution of authors**

T.M. thought of the idea. K.H., J.A., A.M. and A.A. carried out the observations and wrote the first draft. K.H. wrote the final draft. K.H., J.A., A.M. and A.A. hold the raw data, to which T.M. has access.

**Table 1** Table showing the rates of mobile phone usage whilst driving across 3 different sites (A, B and C) in Birmingham over a period of 2 years

<table>
<thead>
<tr>
<th>Site</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phone use</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Before (September–October 2003)</td>
<td>54</td>
<td>3390</td>
<td>119</td>
</tr>
<tr>
<td>After (February–March 2004)</td>
<td>22</td>
<td>3479</td>
<td>61</td>
</tr>
<tr>
<td>Now (September–October 2005)</td>
<td>59</td>
<td>4065</td>
<td>49</td>
</tr>
<tr>
<td>RR (now/before) (95% CI)</td>
<td>0.91 (0.63–1.32)</td>
<td>0.62 (0.45–0.87)</td>
<td>1.38 (0.90–2.12)</td>
</tr>
<tr>
<td>RR (now/after) (95% CI)</td>
<td>2.28 (1.40–3.71)</td>
<td>1.25 (0.86–1.82)</td>
<td>2.15 (1.31–3.54)</td>
</tr>
</tbody>
</table>

Site A, traffic-light T-junction; site B, pedestrian crossing; site C, roundabout.
Conflicts of interest
None.

Funding source
None.

Ethics
Ethics committee permission was not required.

References

Khalid Hussain, Julien Al-Shakarchi, Anys Mahmoudi, Ali Al-Mawlawi and Tim Marshall
Department of Public Health and Epidemiology, University of Birmingham, Birmingham B15 2TT, UK
E-mail: kxh313@bham.ac.uk
doi:10.1093/pubmed/fdl057
Advance Access Publication 14 September 2006

Inappropriate lack of stratification by elective or emergency operation status and missing information on important confounders

Sirs,

I would wish to comment on the article by Judge et al.1 and the observed association between volume and outcomes for hip and knee joint replacement surgery in England.

The authors examine the effect of volume of activity at a hospital (as opposed to individual surgeon) level. Rephrasing the title as ‘...centre volume of activity and training status...’ and omitting the potentially misleading words ‘surgical volume’ would have been more precise.

The authors refer to studies examining the volume-outcome relationship in a rather selective fashion, suggesting that most of the evidence relates to cardiac revascularization surgery. It is not clear why congruent evidence relating to a multiplicity of different procedures and conditions, including surgery for many different cancer sites as well as specialist surgery for ‘benign’ conditions such as morbid obesity,2 is ignored.

Emergency joint replacement operations confer a high excess risk of 30-day mortality [the authors report an adjusted odds ratio (OR) value >5]. Persons requiring emergency hip replacement usually suffer from fractures of the femoral neck or head, whereas persons requiring a hip replacement electively usually suffer from chronic osteoarthritis—two patient subgroups with entirely different characteristics, care pathways and risk profiles. It would have therefore been much more informative if the analysis was stratified for elective and emergency operations and presented separately. Use of regression techniques, even after the examination of potential for effect modification between two variables, does not obviate the need for the description of stratified results, when it is clearly appropriate.

In interpreting the findings, the authors seem to ignore the potential relevance of a wide range of important confounders, including volume of activity at the individual surgeon level and availability and quality of post-operative supportive care (including specialist nursing and physiotherapy). Clearly, and as this study also reiterates, procedures on patients undergoing emergency hip replacement (for fractures of the femoral neck or head) are responsible for a disproportionately large number of deaths. For such patients, timely access to surgery is also important, and the availability of medical and anaesthetic expertise and support can be important in enabling access to surgery.3

In conclusion, in relation to hip replacements, this study examines the potential relationship between volume and outcomes at a hospital level only, rather inappropriately aggregating emergency and elective presentations and not fully accounting for the range of other important variables, particularly in relation to emergency presentations. As such, it presents policy makers with evidence that is extremely difficult to translate into any meaningful, and most importantly, evidence-based action.

References