

## **Persisting mobile phone use while driving and possible solutions for New Zealand**

In New Zealand the use of hand-held phones while driving was prohibited in 2009, but ‘hands-free’ phones are still permitted. We recently presented the results of an observational study into mobile phone among Wellington drivers at a conference (for details see the proceedings<sup>1</sup>). The main findings were that out of 8335 cars systematically observed at traffic lights and 9520 cars in moving traffic (each at three different Wellington locations), the use of mobile phones was 1.87% (95%CI: 1.60-2.18) and 1.34% (95%CI: 1.13-1.59) respectively. As well as the significantly higher usage at traffic lights versus in moving traffic, other notable findings were:

- Younger drivers (<25 years) were significantly more likely to use their mobile phones while driving compared to older drivers (e.g., in moving traffic, risk ratio = 2.91, 95%CI=2.00–4.22).
- Overall, it was much more common for drivers to use their phones in a “non-ear position” as for “texting” (at 77.8%), than next to their ear. This was also significantly higher among younger drivers compared to older drivers.

It is difficult to interpret our Wellington results for 2012, relative to a pre-law study published in 2006 for Auckland<sup>2</sup> which reported 3.9% of drivers using mobile phones while driving. Not only might there be differences by location, there were various differences in study methods. Nevertheless, the lower usage level found in our Wellington study could reflect some partial successful effect of the 2009 law that banned the use of hand-held phones while driving. Although international data are somewhat mixed as to how effective such laws are in the long-term (e.g. for the UK<sup>3</sup> and New York<sup>4,5</sup>), it does appear that they can be successful, especially if there is stringent enforcement (e.g. Washington DC<sup>6,7</sup>).

Nevertheless, the current situation in New Zealand is still problematic, given that the science around the hazard of any mobile phone use while driving keeps getting stronger (e.g. Canadian research<sup>8</sup>). Furthermore, driver distraction associated with mobile phone use may be becoming more hazardous, with greater ownership of attention-demanding smartphones and other nomadic devices.

So what should be done? Continuing with New Zealand Government funded mass media campaigns around the hazard may help (as run during 2012), but a careful analysis of the message around driver distraction and the cost-effectiveness data on these campaigns should be undertaken. At the same time, we believe other options involving some combination of technological and legal changes should be explored as per the suggestions below:

- All new cars imported into New Zealand (e.g. from the year 2018) might be required to have technology that automatically stops mobile phones from ringing when the vehicle is in motion (along the lines discussed by others<sup>9</sup>).

- All new mobile phones permitted on the New Zealand market from 2018, could be required to automatically disable themselves from working when their internal GPS sensor identifies movement (albeit with an exemption for phoning the national emergency number). This option could work alongside the “smart car” option above, or may obviate its need. It could potentially help prevent injuries among people who use electronic devices while cycling (for whom injury risks appear elevated<sup>10</sup>).
- Introduce new regulations that increase fines and/or other penalties for infringements of the existing law. International evidence has shown this to have a strong deterrent effect and is key to maintaining the effectiveness of laws prohibiting drivers’ use of mobile phones. One option includes mobile phone confiscation from those using them while driving.
- Address the residual need to prohibit hands-free phones in cars given the incontrovertible evidence, collected internationally<sup>7</sup> and in New Zealand,<sup>11</sup> that these are also highly distracting for drivers. Legislation treating hands-free and hand-held mobile phones uniformly will also add a degree of clarity around the reason for the prohibition (driver distraction rather than manual interference) in public education campaigns, which may ultimately be needed to address the proliferation of other in-car distractions. Exemptions for commercial drivers and emergency workers could still be permitted, once drivers’ demonstrate appropriate knowledge around hazard mitigation (e.g. how to keep to short sentences when conversing).

There should be public discussions around these various options to potentially improve them and to identify even more effective and cost-effective solutions. Nevertheless, given that passing a law is not particularly expensive in New Zealand (e.g. typically at NZ\$3.5 million<sup>12 13</sup>; 95%UI: 2.0–6.2 million), it would not take long for such a new law to be cheaper than one or two mass media campaigns. But the new law would probably also be much more cost-effective than media campaigns if its effects lasted many decades into the future. So while the New Zealand Government was relatively slow to introduce the 2009 law, let’s hope for better progress with the next one. Perhaps it is time for the right mix of “smartphones”, “smart cars” and “smart politicians”?

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