

may also govern *khat*'s influence on driver impairment.⁵

Driving while chewing, or having recently chewed, *khat* is implicitly outlawed in Ethiopia under a federal law banning "driving under the influence of mind-affecting drugs". However, many of the traffic police officers we interviewed were not aware of this law. Further, there is no readily available technology that tests for *khat* consumption. A simple method is to ask a driver to stick out his/her tongue and check if it is stained green. However, this test does not provide an accurate guide of the quantity of *khat* consumed and the drug's effects are likely to outlast such staining.

The global context

In considering appropriate responses to *khat* consumption, lessons can be drawn from international experience of dealing with driving under the influence of other drugs. There is growing awareness of the influence of a range of medicinal and recreational drugs – both legal and illegal – on road safety.⁶

As it is legally available and integral to social life for many people, *khat* use in Ethiopia is comparable to alcohol use in many high-income countries. However, unlike *khat*, the impairment effects of alcohol on driving are well understood. This has provided evidence on which countries have built extensive

regulatory frameworks and responses, such as public education campaigns, permitted driver blood-alcohol concentrations and testing technologies. Similar responses might prove to be appropriate for *khat*. However, as with alcohol, responses must be based on thorough understanding of the effects of *khat* on driver impairment, an appreciation of the social context of its use and consideration of the practicality of regulation. Currently, this evidence is not available for *khat*.

Road safety research

Globally, relative to the scale of the health problems caused by road crashes, there has been insufficient investment in research and interventions to reduce road traffic injury. Existing research has been skewed towards issues that concern high-income countries, such as alcohol and, more recently, the use of mobile phones while driving. We suggest that *khat*-related impairment could be an overlooked contributor to the extraordinarily high traffic crash and fatality rates in Ethiopia and other countries in eastern Africa.

What is now needed is empirical research that identifies the impairment effects of *khat* grounded in social understanding of how *khat* is used. We propose two research questions: (i) What is the relationship between the consumption of *khat* and driver impairment? In

particular, is it safe for a driver to chew a small amount of *khat*? And if so, what is a "safe" amount? (ii) Given that *khat* is often used by drivers to help them stay awake, what are the effects of *khat* combined with fatigue?

We also propose three social research questions, which need to be answered to inform effective policy responses: (i) Which drivers chew *khat*? (ii) When, and under what circumstances, do they chew it? (iii) What beliefs do drivers have about the effects of *khat* on their driving ability?

Without further research, Ethiopian policy-makers will remain inadequately informed about the real impact of *khat* on drivers and will be unable to design meaningful legislation or effective road safety education campaigns. The public will remain unaware of the risks of chewing *khat* and driving, and will be unable to make informed decisions such as whether or not to board a bus if a driver is chewing *khat*. Road building continues apace in Ethiopia but the contribution of *khat* use to the country's poor road safety record is not yet understood. ■

Acknowledgements

We thank Mahateme Mikre and Daniel Hailu for their invaluable assistance with interviewing informants.

Competing interests: None declared.

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Corrigenda

In volume 88, Number 1, January 2010, the footer for pages 22–30 should be "Bull World Health Organ 2010;88:22–30" and the footer for pages 58–65 should be "Bull World Health Organ 2010;88:58–65".

Also in volume 88, Number 1, January 2010, page 49, the affiliation for David Carmena should read: Medical Research Council, Imperial College London, Du Cane Road, London, W12 0NN, England.