

# Speakers corner. To frack or not to frack? Why is that not a global public health question and how should public health practitioners address it?

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Large-scale unconventional gas extraction (UGE) includes coal bed methane, shale gas and coal gas. It may involve fracking or fracturing of shale and other seams via wells. Fracking is planned or underway in North America, Africa, Europe, Australia and Asia. Frackers make great profits and assure those to be fracked that the activity, product and any minimal pollution will be tightly regulated and carefully run by the companies. Hence communities will be safe, the energy supply will be better for the environment and jobs and economic growth will be created. Some who are being fracked also receive financial benefits and are happy with the process. Others so fracked are not.

Many European communities, about to be fracked, are opposed to the process because UGE continues to contribute to global climate change, threatens their health and well-being with more than 750 chemicals and uncertain planning and property impacts in the short, middle and long term. The United Nations Environment Programme (UNEP) issued a call for a review of all current fracking related policies and practices.<sup>1</sup> Many targeted communities are very deprived with vulnerable populations in terms of ill-health and pollution. This is further compounded as UGE begins to mirror tobacco, asbestos, benzene, lead, chrome, beryllium and the offshore oil industry where industry governance, regulation and enforcement, ethics, industry-funded research, governmental quiescence and the sometimes questionable role of industry health consultants have all produced major public health problems.<sup>2 3</sup> “Delayed recognition of adverse effects due to the some of the above list of substances) incurred not only serious environmental or health impacts, but massive expense and reductions in competitiveness for firms and economies persisting in the wrong

path.....Innovations reinforcing fossil fuel energy strategies—such as hydraulic fracturing—arguably offer a contemporary prospective example.”<sup>4</sup> Communities face an unequal struggle when contesting fracking plans as they lack funds and access to both corporate lawyers and health professionals who act as consultants for the onshore and offshore oil industries.

So what should the role be for public health- to mitigate possible adverse health effects as planning laws require, to monitor health effects, to carry out baseline health studies, or to represent vulnerable communities? Some would argue it should be all of these but the roles may conflict. Many fracking developments have not been subject to individual, local and regional health impact assessments, lack baseline health studies and gain approval through narrow planning and legal requirements. Where public health input is required, its capacity to identify potential health threats may be limited to simply mitigating any possible adverse effects. Professional consultants may be paid for by fracking companies and sometimes their health assessments seem to find in favour of whichever side pays them. Formal public health input may be marginal or non-existent.

Public health professionals need to be impartial but should be precautionary and not neutral in speaking up for vulnerable communities in fracking areas, yet globally they often appear strangely silent on this topic. The WHO has considered the effects of fracking on health and the environment to be ‘mostly unknown’ while recognising the number of carcinogens used, the massive water usage involved, the wastewater toxicity problem and the silica threat to workers.<sup>5</sup> So public health staff should closely analyse existing fracking data and flag up important data gaps as well as any ethical problems posed by industry and its research. Doctors for the Environment Australia<sup>6</sup> and the American Public Health Association (APHA),<sup>7</sup> the exceptions rather than the rule, have done this well. The APHA, while accepting a

mitigating role in fracking health impact assessments, recognised that UGE would not end global warming and posed a ‘potential risk to public health and the environment especially for vulnerable low-income groups. In addition APHA found ‘an increasing number of case reports, agency documents, and environmental models that suggested that this process presents unique and significant health concerns’.<sup>7</sup> Since 2012, more research about the adverse public health effects of fracking has been published.<sup>8</sup>

The nineteenth century German epidemiologist, Rudolf Virchow, of course believed “the physicians are the natural attorneys of the poor, and social problems fall to a large extent within their jurisdiction.”<sup>9</sup> For Virchow “medicine, as a social science, as the science of human beings, has the obligation to point out problems and to attempt their theoretical solution.” There is a powerful and pressing argument now for public health practitioners to follow Virchow and to start to move beyond repeatedly pointing out the many problems of fracking. Their next prudent steps should address ‘theoretical’ and indeed practical energy solutions without adding to global climate change while being attorneys protecting the mental and physical health and well-being of vulnerable communities threatened by fracking.

**Competing interests** None declared.

**Provenance and peer review** Commissioned; externally peer reviewed.



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**To cite** Watterson A. *J Epidemiol Community Health* 2016;70:219–220.

Received 9 December 2014

Accepted 27 July 2015

Published Online First 11 August 2015

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*J Epidemiol Community Health* 2016;70:219–220.  
doi:10.1136/jech-2014-205359

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