



SECTION 23

The Precautionary Principle

2012 Supplement

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Disclaimer.: The views expressed are those of the author and do not represent the views of the EEA or its Management Board. The author has no competing financial interest in the matters dealt with.

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I. INTRODUCTION

In 2007, the evidence for EMF, and in particular radiofrequency radiation (RFR) from the use of mobile phones, was a focus for discussion in the BioInitiative Report (2007). It arose from growing scientific evidence of possible health risks, with a very large global population that could presumably be affected by the outcome.

Illustrating the importance of observing ‘early warnings’ of environmental and public health risks arising from emerging scientific studies and direct observation of impacts to peoples’ health, this author wrote about the importance of applying ‘lessons learned’ from the histories of selected public and environmental hazards, from the first scientifically based early warnings about potential harm, to the subsequent precautionary and preventive measures, as reviewed by the European Environment Agency in Late Lessons from Early Warnings: the Precautionary Principle 1896-2000 (EEA, 2001). In considering the evidence on mobile phones and head cancers the EEA concluded that it would be prudent and timely to issue an “early warning” on the issue, in September, 2007. Five years on, this note briefly updates our opinion on this issue.

II. NEED FOR PRECAUTIONARY ACTIONS ON MOBILE PHONES

The communication leaflet for publication of “Late Lessons from Early Warnings 2: Science, Precaution, Innovation.” (EEA, 2012) includes this message:

“In the context of scientific uncertainty and ignorance, the decision-makers responsible for incentivising and regulating innovation face a significant challenge in balancing opportunities against risks. The precautionary principle can help to better manage such choices. It requires actions to prevent potentially serious harm before the likelihood or severity of an innovation's impacts become all too clear.”

Volume 2 of ‘Late Lessons’ includes a chapter on mobile phones and brain tumour risk by Hardell, Carlberg and Gee. Inclusion of a full chapter on the science and public health implications of the mobile phone-brain cancer issue underscores the importance to the European Environmental Agency that mobile phone radiation is a possible health threat. This position is supported by the 2011 classification by the World Health

Organization International Agency for Research on Cancer (IARC) of radiofrequency radiation as a Group 2B Possible Human Carcinogen (Baan et al, 2011).

The evidence in 2012 is stronger than in 2007, and based essentially on two large population studies, the Hardell group in Sweden and the Interphone Study Group which involved 13 countries (WHO Interphone Final Report, 2010; Cardis & Radetski 2010? Hansson Mild et al, 2007; Hardell et al, 2006a, 2006b, 2006c; Hardell et al, 2008; Hardell et al, 2009a, 2009b; Hardell et al, 2010; Hardell et al, 2011a, 2011b; Hardell et al, 2012a in press; Hardell et al, 2012b in press). Are all 12 refs from Hardell needed? Looks like overkill...how about those from 2009?

Some researchers have identified in the last five years “*a consistent pattern of increased risk of glioma and acoustic neuroma associated with use of mobile phones and cordless phones.*” (Hardell et al, 2012b in press), a view that is essentially supported by the leader of the Interphone study. (Cardis & Radetski)

The European Environmental Agency’s view on the need for precautionary measures on mobile phones is more warranted in 2012, than it was in 2007, or even early 2011, prior to the IARC decision, when we last reviewed the evidence for a presentation to the Council of Europe (EEA, 2011).

Precautionary actions that can be taken to reduce exposures to RFR would be consistent with actions that have been recommended for other emerging environmental and health issues, for example some uses of the common plastic, BPA, some nanotechnologies, and some food chain additives or contaminants, such as antibiotics, beef hormones, and GMOs. The 25 or so more historical case studies in the ‘Late Lessons’ volumes such as those on the Minamata Bay disaster, asbestos, leaded petrol, and tobacco illustrate the huge costs of not taking robust early warnings seriously.

Precautionary measures are of particular importance in regard to children, who are generally more biologically sensitive, may be unable to protect themselves; and for whom such exposures may carry greater life-time health risks than they do for adults.

The evidence for a brain tumour risk from mobile phones is still not well established

amongst all researchers in the field and there is much scientific controversy about what the current evidence means. The debate is not helped by what might be termed ‘trial by media’ where some scientific advocates leap into the lay press to argue their own case just as, or even before, their research is published. The effects of this behaviour would be minimized if the results of genuine differences of scientific opinion were made transparent when they were published, with clear explanations about the origins of divergent views, such as the scientific paradigms used (“tissue heating” or “information physics” ?); assumptions made; evidence rejected; and values chosen. This does not tend to happen. Divergent scientific views are often smoothed over with the use of what one respected commentator on the reporting of the Interphone results called “oracular “ sentences (Saracci & ?? 2010 ?) which thereby give the media and others the opportunity to report quite opposite conclusions from the same study, as was the case with the Interphone study.

We note that countries including France, Germany, Belgium, Austria, Italy, Russia, India and others have moved toward cautionary warnings and some have revised some target exposure levels for new wireless facilities in line with recommendations issued in 2007. Further actions appear now to be warranted, especially in light of the authoritative 2011 IARC cancer classification.

The IARC, and the EEA, may be wrong to suggest there could be a brain tumour risk from the extensive use of mobile phones, and we dearly hope we are wrong. However, it is worth noting that during over 30 years of classifying cancer risks, covering around 900 agents, IARC very rarely downgrades its judgements: in most cases tentative carcinogens become more certain carcinogens as time since first exposures and further research accumulates. Is it not worth gambling that mobile phones will be one of those very rare cases where IARC has over-classified an agent? We think not. The human cost of getting such a gamble wrong would be too great, especially in light of the relatively low cost of reducing exposures significantly.

III. REFERENCES

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