

Response by the Homeopathy Research Institute to Australian NHMRC report

'Effectiveness of Homeopathy for Clinical Conditions: Evaluation of the Evidence'.

Overview Report prepared for the National Health and Medical Research Council (NHMRC) Homeopathy Working Committee by Optum, October 2013

The Homeopathy Research Institute (HRI) welcomes attempts to critically evaluate the evidence base for homeopathy, providing this is done accurately and objectively. Unfortunately the recently published 'Overview Report' by Australia's National Health and Medical Research Council (NHMRC) fails on both counts: it does not accurately reflect the findings of the original research studies in homeopathy and its conclusion that the evidence 'fails to demonstrate that homeopathy is an effective treatment for any of the reported clinical conditions' is seriously misleading. Responses in the media have further misconstrued this conclusion, implying either that there are no positive studies showing that homeopathy is effective, or that the evidence shows homeopathy is no better than placebo – neither of which are true.

HRI applauds the NHMRC's decision to assess the evidence by individual clinical condition – an approach which makes this report far more useful than the negative pseudo-scientific 'Evidence Check 2' report in 2010 published by the UK House of Commons Science and Technology Select Committee¹. The report is needed and timely, following on from the Swiss HTA report in 2006^{2,3}, which concluded in favour of the existence of clinical effects of homeopathy but was criticised, by some, on methodological grounds.

However, sadly the NHMRC made a critical mistake in the way they analysed the evidence, which explains how they reached their inaccurate conclusion that there is no 'reliable' evidence that homeopathy is effective for any of the 61 conditions under consideration. In this systematic review of systematic reviews, the NHMRC have considered the results of **all trials for one condition together as a whole**, despite the fact that the individual studies were testing different types of homeopathic treatment.

The NHMRC reviewers asked, "*Is **homeopathy** effective for condition Y?*", working from the premise that a positive trial showing that one homeopathic treatment is effective is somehow negated by a negative trial which shows that a completely different homeopathic treatment for that same condition is ineffective.

This is a bizarre and unprecedented way of assessing scientific evidence. In conventional research the question asked would be, "*Is **treatment X** effective for condition Y?*", not "*Is **conventional medicine** effective for condition Y?*" based on combining the results of all drug trials together.

Some treatments work, some don't. The whole point of medical research is to establish which treatments are useful and which are of no value. This is no different in homeopathy.

Unfortunately this basic error by the NHMRC means that their findings tell us nothing about which homeopathic treatments do and don't work for specific conditions, making this whole exercise of questionable value.

When one looks at the evidence appropriately – by specific treatment – there is evidence which meets the NHMRC’s inclusion criteria (good quality prospective, controlled studies), which demonstrates effectiveness for certain homeopathic treatments for several conditions e.g.

- individualised homeopathic treatment for diarrhoea⁴ and otitis media^{5,6} in children,
- two different non-individualised treatments for allergic rhinitis – the homeopathic medicine *Galphimia glauca*⁷ and the isopathic medicine *Pollen 30c*,⁸ and
- the non-individualised complex homeopathic medicine *Vertigoheel* for vertigo.⁹

It is imperative that the NHMRC either acknowledge the serious error they have made by analysing mixed data sets in this way and amend their Overview Report accordingly, or provide justification as to the scientific validity of their work. Without this, it is hard to see any value in their findings concerning effectiveness of homeopathy.

A second key reason why the NHMRC reviewers found ‘no reliable evidence’ that homeopathy is effective, is the definition they used for ‘reliable evidence’.

Although certain elements of their definition are reasonable e.g. flaws in poor quality studies, the NHMRC also dismissed high quality positive studies as being ‘unreliable’ if either of the following applied:

- The number of participants in the trial was less than 150 (even in instances where the results were statistically significant, in which case the number of participants was sufficient)
- The study had been repeated multiple times by one research team, but not yet been repeated by another independent team, or a single study had not yet been repeated.

The NHMRC need to justify their use of n=150 as a line between reliable and unreliable and they certainly need to explain why size is relevant at all when the findings are statistically significant.

The HRI does not dispute the fact that positive studies should be replicated (ideally by multiple independent research team), but we do dispute the NHMRC’s failure to identify these positive studies in their Information Paper as promising studies which should be repeated.

The NHMRC have drafted an Information Paper, based on the findings of their Overview Report, targeted at the general public. In this document they again state that they found “no reliable evidence” for the conditions considered. As the public are likely to interpret this as meaning that there are either no trials for that medical condition, or that the trials that exist are flawed in some way, the NHMRC has severely misled the public on this issue.

A more transparent appraisal would have identified the conditions for which good quality studies exist showing that certain homeopathic treatments are effective, but stating that these studies need to be repeated to confirm the findings before definitive conclusions can be drawn.

The NHMRC conducted a public consultation on this draft Information Paper, inviting external input as to whether the information provided clearly outlines how the evidence was reviewed and interpreted. HRI gave input to this consultation identifying various concerns, most of which can be summarised by our recommendations regarding amendment of the Overall Finding paragraph. This currently reads as follows:

‘There were no health conditions for which there was reliable evidence that homeopathy was effective. No good-quality, well-designed studies with enough participants for a meaningful result reported either that homeopathy caused greater health improvements than a substance with no effect on the health condition (placebo), or that homeopathy caused health improvements equal to those of another treatment.’

In order for this Overall Finding to clearly reflect how the evidence was reviewed and interpreted, HRI has suggested that it be changed to read as follows:

‘For the 61 health conditions considered, if we consider only prospective, controlled trials published in English, and discount all trials with less than 150 participants (even if they had positive statistically significant results), and if we discount positive trials that have not yet been repeated by other teams of researchers, and if we then combine all trial results for each condition, we can say that there was no reliable evidence demonstrating that homeopathy was effective.’

Having alerted the NHMRC to these concerns via the public consultation process, we look forward to hearing their response, along with either justifications for their approach or details as to how these problems will be corrected before the Information Paper is finalised.

Overall, the fact that the reviewers found a lack of definitive positive evidence of effectiveness for homeopathy in specific conditions is not surprising, as this is a common result with systematic reviews: for example, 49% of systematic reviews on conventional medicine reach similar ‘inconclusive’ conclusions and 96% recommend further research.¹⁰ Furthermore, of 2500 treatments with good evidence used within the NHS, only 15% have been shown to be clearly ‘beneficial’, showing that the evidence base for most treatments needs further development.¹¹

The HRI does however agree with the NHMRC’s conclusion that,

“There is a paucity of good-quality studies of sufficient size that examine the effectiveness of homeopathy....”.

Due to a lack of funding, most homeopathy research studies involve small numbers of participants and, as we have seen here, many positive studies are dismissed on this basis alone. As the funding available for research in homeopathy is minuscule compared to that dedicated to conventional medical research, homeopathy finds itself in a *Catch 22* situation – critics say there is a lack of evidence of effectiveness because the existing trials are too small, then use this ‘lack of evidence’ to say funding should not be provided for future studies.

As for raising standards in research, this is an issue across the board. Only one study has ever looked directly at the quality of trials, comparing matched studies of homeopathy and conventional medicine, and the results showed that the homeopathy studies were, in fact, of higher quality than comparable trials from conventional medicine (19% of the homeopathy trials were assessed as 'higher quality' compared to 8% of the conventional-medicine trials).¹²

In short, the NMHRC report has highlighted the need for a level playing field i.e.

- Sufficient funds need to be made available to conduct high quality, large-scale trials to test the most promising homeopathic treatments (such as those identified above), and
- The existing evidence base needs to be assessed using the same scientific methods used to assess conventional treatments.

Only by taking this fresh, fair approach can we move past the current impasse in the decades-old debate surrounding homeopathy and conduct research which provides the public, healthcare providers and decision-makers with truly useful information about the clinical value of homeopathy.

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