Response to the draft Information Paper of the NHMRC on Homoeopathy

(Ana Lamaro)

The NHMRC has released its information paper on homoeopathy for community consultation. It finds negatively for homoeopathy, yet declares in the same document that its method for so-finding has limitations as expressed on page 18 of the NHMRC Draft Information Paper).

The 2yr long NHMRC review, which employed the professional research body OPTUM and the services of a body of (exclusively non-homoeopathic) experts, The Homoeopathy Working Committee, chose to focus on systematic reviews alone "rather than searching for all individualised published studies in homoeopathy". This methodology was chosen despite the range of serious disadvantages of thus limiting the review, which the NHMRC itself acknowledges (see p.18).

The NHMRC has also failed to acknowledge other significant limitations to their consideration of the reliability of their methodology for assessing the efficacy of homoeopathy, despite the fact that these were brought to their attention in the AHA submission. This serious scientific error of process impacts on the reliability of their conclusions:

- Research practices may obscure, rather than exemplify homoeopathic practice. Systematic reviews, especially those incorporating meta-analyses may be of limited value, in the absence of multiple trials using very similar trial design, studies cannot be combined with any reliable degree of research rigour. Submissions from the homoeopathic profession cautioned the NHMRC against sole reliance on the use of systematic reviews. The validity of systematic reviews depends on a number of critical factors, most principally the quality of the studies included and the homogeneity of those studies, and a range of other unmatched variables may further limit the reliability of such reviews. Homoeopathy is practised in a variety of ways, so that sufficient numbers of similar-enough trials to contribute to valid systematic reviews can be problematic.
- The Australian Register of Homoeopaths and the Australian Homoeopathic Association provided a detailed summary of the research evidence for homoeopathy in its March 2013 submission.

The 192 randomised controlled trials cited in the AROH/AHA submission, investigating 81 different medical conditions, reflect the heterogeneous nature of homoeopathic practice:

- Of the 61 of the RCTs used individualised homoeopathy (35 positive, 24 inconclusive, 2 negative);
- Of the 61 used mixtures of medicines (complexes) (31 positive, 29 inconclusive, 1 negative);
- Of the 15 used isopathy (10 were positive, 4 inconclusive, 1 negative); and 55 used prescriptions based on the presenting pathology (20 were positive, 31 inconclusive, 4 were negative).
- In summary, of 192 RCTs, 96 were positive, 88 were inconclusive, and 8 were negative. While the NHMRC concluded that *'There is no reliable evidence that homeopathy is effective for treating health conditions',* it fails to report that there 96 positive RCTs investigating homoeopathic treatment of humans in a wide variety of conditions, and using a variety of prescribing methodologies, and that although this evidence may in some instances be of a lower quality, it does not support a conclusion that homoeopathic treatment equates to placebo treatment. To answer the question that the NHMRC is asking requires further carefully designed research.
- Trials investigating individualised homoeopathy present particular challenges to double-blinded RCT design. This is especially so when treating patients with chronic diseases requiring assessments on multiple occasions for treatment decisions where it is not known if the patient had received the active homoeopathic medicine or placebo. Not knowing whether to change the homoeopathic medicine, or repeat it because a placebo was last given, adds an extra variable to an already complex clinical decision, a variable not present in normal practice. In other words, a trial design may be appropriate to the testing of a single drug with a predefined dosage, but is not suitable for testing a system of medicine that requires decisions at every consultation which include changing homoeopathic medicine, potency and/or dose frequency. If trial design does not avoid such issues, then ambiguous conclusions may result. In 28 RCTs suffering from these design problems, 36% yielded positive results for homoeopathy. Of the 33 RCTs also cited, which were designed to avoid this problem, 76% showed results favourable for homoeopathy. If only the double-blind, placebo-controlled trials of these 33 trials are examined, 80% of these are found to be positive for homoeopathy. The NHMRC

chooses to ignore such positive findings the effect of which distorts the conclusions of many of the systematic reviews, and of some of the RCTs involved.

- The effects of homoeopathic medicines are usually considered by homoeopathy's detractors to be placebo effects. Of the 192 RCTs cited in the submission made by the homoeopathic profession, if its benefits were due solely to placebo, based on the criterion of $p > 0.05$, then a maximum of 9 trials only could be expected to favour homoeopathy. 96 of these trials find favourably for homoeopathy, displaying more than ten times the possible chance occurrence, countering the placebo-only argument. Of the 149 trials which used placebo as a comparison, 74 are found to be statistically significant, where one would expect only 7 to be positive if homoeopathy were due to placebo effects.

The AROH/AHA submission highlights 29 systematic reviews where the problem of heterogeneity of medical conditions was avoided, and found that 11 of these proved broadly positive for homoeopathy: these included reviews of allergies, upper respiratory tract infections, childhood diarrhoea, influenza, post-operative ileus, rheumatic diseases, seasonal rhinitis and vertigo.

The evidence contained in systematic reviews is also fluid. The relevance of a systematic review only prevails until another trial is published which fulfils the selection criteria. Authors of systematic reviews may also be biased, selecting subjects to review that contain no or few trials in order to denounce homoeopathy, or by using poor methodology e.g. illogical selection/exclusion criteria. This was the case with the much-quoted review by Shang et al (2005); along with a range of other serious deficiencies, this review ignored available evidence from 41 eligible research trials which it failed to include in its study. The 2010 UK House of Commons inquiry into homoeopathy, which found negatively for homoeopathy, placed undue reliance on the flawed Shang study, despite being advised of its serious deficits. It is a salient point here that only three of the thirteen members of the HOC committee were prepared to vote on the committee’s findings due to the perceived prejudicial nature of the inquiry.

Further technical problems arise in the use of meta-analyses. As noted by Charlton (1996) 'the "meta-protocol" and "meta-population" must also match the target situation in all relevant particulars'. Analysing at these levels of

complexity and adjusting for the requirements of matching the target setting is an assumption-laden process, perhaps inadequately performed by statisticians; the statistical advantages of the meta-analysis may be negated in this process.

Ben Goldacre, a U.K. medical researcher, describes the irrelevance of many trial findings to real-world conditions as a “quiet, dismal scandal” (Goldacre, 2012). The NHMRC chose to ignore observational and outcomes studies, where effectiveness of treatments in real-world conditions may be examined. Clinical effectiveness pertains to the multiplicity of factors met with in population usage, where the complex interactions of length of use of medicines, drug interactions, and co-morbidities are displayed. The AROH/AHA submission cites very large population studies, commonly of cohorts of 1500 to 6000 subjects, derived from homoeopathic outpatient clinics in the U.K. and Europe, all of which find overwhelmingly positively for homoeopathic treatment. The submission also provided extensive evidence of both the safety and the affordability of homeopathic treatment, which compares very favourably against both the cost and the side-effect-heavy arena of conventional medical care.

The NHMRC failed to conduct a direct examination of the evidence provided to them, but instead drew on evidence from what others had found - that from selected systematic reviews.
The NHMRC also unfortunately chose to discard level IV evidence, veterinary evidence, laboratory evidence and the evidence from preventative use of homoeopathy. Nevertheless, from the evidence they did canvas, it cannot be said that homoeopathy does not or cannot work, only that the studies are not large enough, or there are not enough repeated studies.

Much of general medical therapeutics in use lacks an evidence base as reported on the BMJ website in 2011:
‘Of around 2500 treatments covered 13% are rated as beneficial, 23% likely to be beneficial, 8% as trade off between benefits and harms, 6% unlikely to be beneficial, 4% likely to be ineffective or harmful, and 46%, the largest proportion, as unknown effectiveness’.

Two out of three Australians used complementary therapies in 2010-11. Genuine research into a safe, affordable and effective treatment such as homoeopathy would not limit its research tool to one which the NHMRC itself recognises as severely limited in scope, validity and therefore

relevance. A comprehensive study of homoeopathy and complementary therapies by the Swiss government in 2012 resulted in that country resuming provision of health insurance for these therapies as a result of that study's positive findings. The increasing use of complementary therapies has been a community-led phenomenon, where the contemporary patient is an active subject, not merely a passive object of health care. Patients most commonly choose homoeopathy because of prior positive experience with it. Whatever the public policy outcomes of the NHMRC review of homoeopathy, the well-informed, autonomous agent who is the contemporary health-care consumer will continue to exercise freedom of choice in health care.