# An Analysis of the Governmental Funded Meta-analyses and Reviews of Research on Homeopathic Medicine

Dana Ullman, MPH, CCH
Homeopathic Educational Services
www.homeopathic.com

www.HuffingtonPost.com/dana-ullman

### Homeopathy in Europe

- ➤ In 1998, homeopathy was the most frequently used CAM therapy in 5 out of 14 surveyed countries in Europe
- Among the three most frequently used CAM therapies in 11 out of 14 surveyed countries.
- > 3 of 4 Europeans know what homeopathy is, and of these people, an impressive 29 % use it for their health care.
- ➤ 45,000 medical doctors have received training or education in homeopathy
- Approximately 25-40% of general practitioners (GPs) use homeopathic medicines from time-to-time and 6-8% use homeopathic medicines on a regular basis.

### Homeopathy in France

- > 95% of general practitioners, pediatricians, & dermatologists
- > 75% of midwives
- > 95% of pharmacists recommend them for pregnant women
- > 62% of French mothers in the past year!
- Family Practice, August, 2015
- https://www.ncbi.nlm.nih.gov/pubmed/25921648

### Homeopathy in Germany

- ➤ An impressive 57% of people in Germany use homeopathic medicines (BMJ 2010;341:33902)
- The BMJ reported that the German Medical Association has announced its support for homeopathy and for reimbursement for homeopathic care.
- According to Deutsche Welle (a leading mainstream news source in Germany), 92% of doctors who work for the national German football (soccer) team and the top two German football leagues (Bundesliga 1 and 2) use homeopathic remedies

### 100 million people in India!

- ➤ According to the LANCET (Nov, 2007), 100 million people in India rely entirely on homeopathic medicine for all of their health care needs!
- ➤ A Neilsen survey discovered that 82% of these people would NOT switch to conventional treatments.

### 4 Government-Sponsored Reports on Homeopathic Research

- Switzerland (2005)
- Switzerland (2006)
- ► Great Britain (2009-2010)
- > Australia (2015)

# France stops government reimbursement for homeopathic medicines

- ➤ Until 2019, the French government reimbursed for 30% of the cost of a homeopathic medicine
- ▶ In 2020, they reimbursed for 15%
- > In 2021, there will be no reimbursement

# Great Britain withdraws reimbursement for homeopathic treatment

➤ In 2019, "prescribers in primary care should not initiate homeopathic items for any new patient" and should "support prescribers in deprescribing homeopathic items in all patients



### Spain

- In Spanish government has stopped allowing universities to offer degrees in homeopathic medicine,
- The government announced plans to protect the public from "pseudotherapies" such as homeopathy and acupuncture. Sayburn A. Homeopathy in Europe: is the tide starting to turn?
- Medscape. July 29, 2019.
   <a href="https://www.medscape.com/viewarticle/916128">https://www.medscape.com/viewarticle/916128</a>
   Sayburn, 2019.

### 2005: Swiss Report in Lancet (Shang)

- > 110 clinical trials of homeopathy,
- > 110 of clinical trials of allopathy
  - > said to be matched
- > 21 of homeopathy, 9 of conventional medicine were deemed 'higher quality'
  - > quality assessed by internal validity only
  - ➤8 homeopathy (N>98), 6 conventional (N>146) were 'large, high-quality'



#### Results

- ➤ Of the 8 homeopathic trials & 6 allopathy trials, none were of similar conditions
- "there was weak evidence for a specific effect of homoeopathic remedies, but strong evidence for specific effects of conventional interventions."

#### Lancet publication: criticisms

- 8 anonymous clinical trials (initially).
- Not cited, no information (diagnoses, number of patients etc)
- > 93% excluded.
- No sensitivity analysis
  - what is result for all 110 or 21 homeopathy trials of 'higher quality'?
- Only internal validity
  - The extent to which a study measures what it purports to measure
  - -- External validity, the extent to which a study measures something meaningful in the 'real world'



- Shang omitted certain high quality studies and how they defined what is "high quality" is open to question (Reilly's studies omitted, only 1 Oscillo trial included)
- Shang excluded Wiesenauer's chronic polyarthritis study (N=176) because no matching trial could be found (Linde, 1997, defined this study as "high quality"). And yet, because none of the trials (!) in the final evaluation matched each other in any way, omitting inclusion of this study was the result of bias from the authors.



### What is "effective"?

- Three of the six large high quality conventional medical trials tested drugs that were deemed to be "effective" have been withdrawn from medical use due to the serious side effects that later research confirmed.
- Shang acknowledged that their study disregarded adverse effects.

### Shang Confirms Efficacy of Homeopathy for Respiratory Ailments

Shang et al reported a sub-analysis of homeopathy: "the eight trials of homoeopathic remedies in acute infections of the upper respiratory tract that were included in our sample, the pooled effect indicated a substantial beneficial effect." Referring to this as "robust evidence."

### Acknowledged Bias...

- ➤ A. Shang is a known and active skeptic of homeopathy.
- A press release from the Lancet in 2005 quoted from one of its senior editors, Zoë Mullan, who acknowledged: "Professor Eggers stated at the outset that he expected to find that homeopathy had no effect other than that of placebo. His 'conflict' was therefore transparent. We saw this as sufficient."

### Re-Analyses of Lancet (2005)

- R. Ludtke and A.L.B. Rutten, The conclusions on the effectiveness of homeopathy highly depend on the set of analyzed trials, Journal of Clinical Epidemiology (2008)
- ➤ A.L.B. Rutten and C.F. Stolper, The 2005 meta-analysis of homeopathy: the importance of post-publication data. Homeopathy (2008)



### The "Swiss Report"

- The govt of Switzerland funded a "health technology assessment" from a group of professors from Switzerland and Germany
- In a book and in an article published in a peer-review medical journal.
- Bornhöft G, and Matthiessen PF (Editors). *Homeopathy in Healthcare: Effectiveness, Appropriateness, Safety, Costs.* Berlin: Springer, 2011.
- ▶ Bornhöft G, Wolf U, von Ammon K, Righetti M, Maxion-Bergemann S, Baumgartner S, Thurneysen AE, Matthiessen PF. Effectiveness, safety and cost-effectiveness of homeopathy in general practice summarized health technology assessment. *Forschende Komplementärmedizin*. 2006; 13(Suppl 2):19-29.

http://www.ncbi.nlm.nih.gov/pubmed/16883077



### **Evidence of Efficacy**

- ➤ 20 of 22 systematic reviews (meta-analyses) detected a trend in favor of homeopathy, with at least 5 reviews yielding results indicating clear evidence for homeopathy (prior to 2005).
- The report cited 29 studies in "Upper Respiratory Tract Infections/ AllergicReactions," of which 24 studies found a positive result in favor of homeopathy. Further, 6 out of 7 controlled studies showed that homeopathy to be more effective than conventional medical interventions.

#### Review of Basic Science Work

- Botanical studies
- Animal studies
- In vitro studies with human cells
- One systematic review cited 75 publications, 67 experiments (1/3 of them replications) were evaluated. Nearly 3/4 of them found a high potency effect, and 2/3 of those 18 that scored 6 points or more and controlled contamination. Nearly 3/4 of all replications were positive.
- Conclusion: "seem to have regulatory, i.e. balancing or normalising effect and possess a specific physical structure"

### Research "misconduct"?

- DS Shaw claimed "almost all the authors have conflicts of interest, despite their claim that none exist."
- Only 1 of 9 coauthors was a practicing homeopath.

### Full Acceptance in Switzerland!

In 2016 the Swiss government chose to cover homeopathy and four other CAM treatments as a part of the government's national health insurance!

## The British Science and Technology Report (2010)

- This report only sought to evaluate the efficacy, not effectiveness, of homeopathic medicines in clinical research under tightly controlled, artificial experimental conditions.
- > Thus, no studies testing whether homeopathy works on "real patients" under real world clinical conditions were allowed to be discussed or accepted as evidence.

### Throwing out good evidence?

> The S&T Committee initially only accepted as evidence from five systematic reviews of randomized controlled trials (RCTs), but after testimony from Dr. Edzard Ernst, the Committee determined that four of the five systematic reviews, which had findings in favor of homeopathy, should be excluded from their analysis.



### A majority vote?

- ➤ This Committee was composed of 14 Members of Parliament
- Report was approved and signed by a "majority" of only three members, with one vote against the report.
- ➤ Of the three votes in favor, two members were so newly-appointed to this Committee that they did not attend any of the hearings.

### Critics of the S&T Report

- > 70 Members of Parliament expressed their concern by signing an Early Day Motion (EDM 908).
- An independent critique by Earl Baldwin of Bewdley concluded that the Report was "an unreliable source of evidence about homeopathy." Earl Baldwin served on the S&T Sub-Committee that inquired into complementary and alternative medicine in 1999-2000

## Recommendations of the S&T Report

This Report was supposedly just advisory to the UK government, but the government refused to ban homeopathic products based on the recommendations of this Report.

### The Australian Report on Homeopathy (2015)

- The Australian National Health and Medical Research Council (NHMRC) published an Information Paper on homeopathy, which is commonly referred to as "The Australian Report."
- ➤ This report concluded that "there are no health conditions for which there is reliable evidence that homeopathy is effective."

### The Basis for Their Conclusions

- An independent overview of published metaanalyses and systematic reviews,
- An independent evaluation of information provided by homeopathy interest groups and the public and
- Review of clinical practice guidelines and government reports on homeopathy published in other countries.

### Questions of Scientific & Ethical Misconduct

- This report hid the definition for what they meant by "reliable evidence" that homeopathy is effective.
- The authors arbitrarily determined that studies of less than 150 subjects were deemed "too small" to be considered "reliable."
- ➤ The BMJ determines that 20 subjects is adequate.

### Independent Analysis of Report

- No other report ever published by the NHMRC has determined that clinical trials of less than 150 subjects are completely worthless.
- ➤ The Australasian Cochrane Centre wrote a critique of the Australian Report, saying, "No reliable evidence does not seem an accurate reflection of the body of evidence," noting this was due to: "A substantial proportion of small (but good quality studies) shows significant differences."

# Questionable Method of Scientific Analysis

- For each condition evaluated in this report, any trial with a "negative" result were deemed to "cancel out" any positive ones, even though each trial may have tested completely different medicines and prescribing strategies.
- Such analysis is akin to Edison testing tungsten as a metal useful in the transmission of light, but because he previously tested a different metal, tin, and it didn't work,

#### Questionable Ethical Misconduct

> Despite previous multiple denials, the Australian govt in 2019 finally admitted to have commissioned a report on homeopathy that found "encouraging evidence"in the homeopathic treatment in 5 ailments: side effects of cancer therapy, otitis media, fibromyalgia, and postoperative ileus, upper respiratory tract infections.

## First Report Suppressed Despite "High Quality" Work

- Freedom of Information requests demonstrated that Prof. Fred Mendelsohn, a member of the NHMRC's oversight committee, confirmed the first report to be of high quality.
- Mendelsohn asserted, "I am impressed by the rigor, thoroughness and systematic approach given to this evaluation [....] Overall, a lot of excellent work has gone into this review and the results are presented in a systematic, unbiased and convincing manner."

### Formal Charges of Scientific and Ethical Misconduct

- Formal charges against the NHMRC have been filed with the Commonwealth Ombudsman
- Their decision has been delayed and then further delayed due to the pandemic...

### Randomised Placebo-controlled Trials of Individualised Homeopathic Treatment: Systematic Review and Meta-analysis

- Published in "Systemic Reviews," 2014
- ➤ 32 eligible RCTs studied 24 different medical conditions. 12 trials were classed 'uncertain risk of bias', three of which displayed relatively minor uncertainty and were designated reliable evidence
- ➤ 22 trials had extractable data and were subjected to meta-analysis; OR (odds ratio) = 1.53 (95% confidence interval (CI) 1.22 to 1.91). For the three trials with reliable evidence, sensitivity analysis revealed OR = 1.98 (95% CI 1.16 to 3.38)



#### Results

- ➤ Of the 22 trials, 15 had an effect favoring homeopathy (i.e. OR > 1), 3 of them statistically significantly;
- > 7 trials had an effect favoring placebo, none of them significantly. Total sample size = 1,123 (N = 22 trials).

#### Assessment of other Meta-analyses

"Five systematic reviews have examined the RCT research literature on homeopathy as a whole, including the broad spectrum of medical conditions that have been researched and by all forms of homeopathy: four of these 'global' systematic reviews reached the conclusion that, with important caveats, the homeopathic intervention probably differs from placebo."

### Homeopathic Research eBook

Evidence Based
Homeopathic Family Medicine
by Dana Ullman, MPH, CCH

Available at: www.homeopathic.com

# Homeopathic Medicine Kit" with DANA ULLMAN, MPH

- ➤ Includes the eBook + a series of short videos (15 minutes on average)
- Principles and Methodology
- First Aid and "Second Aid"
- User-friendly homeopathy