Submission to Academy of Medical Sciences, 2015

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1. I am a practicing clinician and medical academic working on problems in evidence based medicine. I also work on public engagement, and policy issues.

2. This review is timely. Medicine has changed: information about the benefits and harms of treatments can be more easily collected, analysed, accessed, shared, and discussed, than ever before. Consequently, all of these things can now be done by ever wider groups of professionals and the public. It is important that these democratising shifts are recognised and exploited for patient good, and the potential harms addressed.

3. Public scrutiny has also changed. Vaccine scares have existed for centuries; somewhat newer is the reality of a public that can engage substantively, and in large numbers, with legitimate criticisms of shortcomings in our implementation of the principles of evidence based medicine. While scare stories should be rebutted, legitimate public concern on shortcomings should be harnessed as an engine for change.

4. Tamiflu and statins are an excellent lens through which to examine the avoidable shortcomings in our current attempts to practice and support evidence based medicine. On these two drugs we have seen issues around failure to conduct appropriate trials, regulatory barriers to research, publication bias, unnecessarily restrictive data sharing, poor communication of evidence, conflicts of interest, championing of weak observational data, and more.

5. An ideal world is very attainable, with sufficient enthusiasm and dedicated paid professional effort. Decisions about treatments should be made on the basis of good quality randomised trials, free from avoidable biases, in large numbers of participants, measuring real world outcomes that matter to patients, with all methods and results properly reported, and the results of these trials subjected to unbiased transparent summary and synthesis (with individual patient data shared securely), and that knowledge finally communicated clearly to decision makers, whether those are healthcare professionals or patients, through mechanisms that avoid information overload, and meet individuals' needs.

6. This ideal world cannot be obtained without rigorous strategic overview and adequate strategic funding.

7. I have attached two brief papers that I hope will be useful. One is a 2015 editorial on the Academy's review, setting out concrete practical suggestions on how the Academy could help to fix specific problems in medicine (Goldacre and Heneghan 2015). The other is an editorial on statins, setting out problems with the NICE guidelines, and how we can better support evidence based practice (Goldacre and Smeeth 2014). I would be happy to expand on any of these issues if helpful.

References:

Goldacre B, Heneghan C. 2015. "How Medicine Is Broken, and How We Can Fix It." *The BMJ* 350 (June): h3397. doi:10.1136/bmj.h3397.

Goldacre B, Smeeth L. 2014. "Mass Treatment with Statins." *BMJ (Clinical Research Ed.)* 349: g4745.