

Note of the oral evidence session with Tracey Brown during the '*Methods of evaluating evidence*' Working Group meeting on 5 November 2015

Academy of Medical Sciences, 41 Portland Place, London W1B 1QH
Tuesday 5 November 2015, 11.15-11.45

Tracey Brown – Director, Sense About Science

The session began with an introduction to Sense About Science, which:

- Equips members of the public to make sense of science and evidence, and encourages them to ask questions.
- Challenges misleading claims and aims to stop the flow of misinformation.
- Acknowledges that political and populist pressures continue, regardless of the quality of science.
- Promotes the public interest argument for undertaking sound science and gathering high quality evidence.
- Works with scientists and institutes on a range of science topics, not limited to medical issues.
- Runs AllTrials to achieve better registration and reporting of clinical trials.
- Investigates what the public wants and expects from evidence and its presentation.

Participants then posed questions to collect further evidence. The key points covered were:

Accountability in science and medicine is increasing

- A culture shift in science means it is now more acceptable to question conventional practice.
- The expectation of medical practitioners being held to account has increased enormously.
- However not everything is questioned, and it is not always obvious when something has gone unquestioned:
 - It can sometimes be legally difficult to question practices.
 - It is often assumed that someone else has questioned the evidence.
 - Controversial findings are often questioned, but more mainstream claims or things which 'sound reasonable' can be overlooked.

Explaining and discussing regulation is important but rarely undertaken.

- The fact that something is regulated can make it seem more respectable, e.g. homeopathy is regulated despite its limited evidence base, and this is often cited in arguments for its legitimacy.
- A narrow pool of interested parties respond to consultations: more creativity is needed in gathering evidence and views (e.g. using social media).
- An understanding of the baseline situation is needed before an investigation is conducted, to make sure that the questions which are posed and answered in public engagement and communication are relevant to the public: '**Public led, expert fed.**'

Evidence for how best to communicate uncertainty

- There is a wealth of information about communicating risk and risk perception.

- Context is important, e.g. some think a 1/10 risk of heart attack to be acceptable, others would consider a 1/1000 risk unacceptable; however there are few social science studies on contextual effects, probably due to lack of funding.
- There is a **fear among researchers and officials of handling uncertainty in the public domain: It should be acceptable to say 'this is best we know.'** It is important to communicate how significant the uncertainties are to the problem/question at hand. Misuse of uncertainty can be damaging, particularly when it is used to undermine the validity of results unreasonably. Measuring impact in REF may be detrimental as it provides an incentive for researchers to overstate conclusions and therefore certainty.

Communicating evidence in healthcare settings

- There is an increasing **lack of deference to GPs** as medicine moves away from the paternalistic system. This is good when it promotes questions, discussion and healthy scepticism, but can be damaging when it leads to oversimplifications such as basing the value of a piece of evidence solely on who funded it or whether it's recommended by a health columnist.
 - Medical journals and the media should be clear about when they are campaigning and when they are reporting.
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