

Institution: University of Oxford		
Unit of Assessment: 30 Philosophy		
Title of case study: Influencing policy, educating the public and implementing placebo research that benefits patients		
Period when the underpinning research was undertaken: 2009-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Dr Jeremy Howick	Role(s) (e.g. job title): Senior Research Associate	Period(s) employed by submitting HEI: October 2007—present
Period when the claimed impact occurred: 1 January 2014— 31 December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Jeremy Howick's research has changed the way placebos are understood by the public and used in practice and policy. His research led to a clinical trial in which almost all 117 participants reported a reduction in pain. In another trial, 33 patients resumed taking statin drugs by recognizing the potential role of 'nocebo' (negative placebo) effects. Howick developed guidelines for reporting placebo control components, which are required by leading journals and changed the way placebo-controlled trials are appraised and used. In parallel, his research on empathy generated a training course that improved how doctors and medical students treat patients, and spawned organisational changes at the Montreal Children's Hospital.</p>		
2. Underpinning research (indicative maximum 500 words)		
Leader in the emerging discipline of 'placebo studies'		
<p>Placebo studies have evolved in the last 5 years from a fringe discipline to an internationally recognized, legitimate field of study. This has been achieved most notably with the establishment of an International Society for Inter-disciplinary Placebo Studies. Howick is a founding member of the society, and gave plenary lectures based on his research on empathic care at the inaugural 2017 conference [1] and on negative nocebos at the second (2019) conference [2]. He also co-authored the two consensus statements generated by the Society [3,4]. He is the only philosopher in the society who is not primarily a medical ethicist.</p>		
Overturing the view that placebo do not need to be described in clinical trials		
<p>Until recently, the dominant view (expressed in the Oxford English Dictionary, and many academics) was that placebo interventions were 'inert' or 'inactive'. Inert and inactive interventions are functionally identical and there is no need to describe them. Howick's research on the placebo concept [5], was a key factor contributing to the overturning of this view. In that paper, Howick argued that placebo interventions are complex and heterogeneous.</p>		
<p>The new understanding that placebos are complex, motivated a body of empirical work which culminated in a recent study revealing that placebo components are not adequately reported in 67% of cases [6]. Because placebo controls are often the standard against which the benefits and harms of 'active' interventions are measured, we cannot appraise whether the standard was adequate unless placebo controls are described. Howick's research highlights a number of cases where the placebo control 'standard' was inadequate, usually leading to underestimation of harms or overestimation of benefits [6]. This research led Howick to develop a guidance for researchers reporting placebo and sham control trials (see Sections 4 and 5).</p>		
Re-examining the ethics of placebos and nocebos		
<p>Howick's extensive research on the ethics of placebos led to a recent publication on the ethics of nocebo effects [2]. Compared with the placebo effect, the nocebo effect has been almost</p>		

ignored until very recently, and Howick is among the first to spell out the implications of nocebo effects for the way informed consent is taken in clinical trials and clinical practice. This research informed the motivation for a number of trials, including one of statin tolerance (see Sections 4,5), and has led to a major research award to investigate ways to minimize nocebo effects among trial participants (see Section 3).

Putting the science of positive empathic communication on firmer ground

Howick's research on placebos identified that placebo interventions often require empathic positive communication to produce their effects. This motivated Howick's empirical study on the effects of positive empathic communication [1]. The study was central to informing the intervention that has been feasibility tested in a sample of 10 healthcare practitioners and 100 patients with osteoarthritis pain [J]. It also generated research funding, and empathy training for healthcare practitioners in the UK (see Section 3).

3. References to the research (indicative maximum of six references)

1. [Journal Article] Howick J, Moscrop A, Mebius A, Lewith G, Bishop F, Little P, Mistiaen P, Roberts NW, Onakpoya I (2018). Effects of empathic positive communication in healthcare consultations. *The Journal of the Royal Society of Medicine*, 111(7), 240-252. DOI: [10.1177/0141076818769477](https://doi.org/10.1177/0141076818769477)
2. [Journal Article] Howick J. Unethical informed consent caused by overlooking poorly measured nocebo effects. *Journal of Medical Ethics*. Published Online First: 16 February 2020. DOI: [10.1136/medethics-2019-105903](https://doi.org/10.1136/medethics-2019-105903)
3. [Journal Article] Evers A, Colloca L, Blease C, ... Howick J, et al (2018). Implications of Placebo and Nocebo Effects for Clinical Practice: Expert Consensus. *Psychotherapy and Psychosomatics*, 87(4), 204-210. DOI: [10.1159/000490354](https://doi.org/10.1159/000490354)
4. [Journal Article] Evers A, Colloca L, Blease C, ... Howick J, et al (2018). What should clinicians tell patients about placebo and nocebo effects? Practical considerations based on expert consensus. *Psychotherapy and Psychosomatics*, Published Online First: 19 October 2020. 90(1):49-56. DOI: [10.1159/000510738](https://doi.org/10.1159/000510738)
5. [Journal Article, listed in REF2] Howick J (2017). The relativity of placebos: defending a modified version of Grünbaum's definition. *Synthese*, 194(4):1363–1396. DOI [10.1007/s11229-015-1001-0](https://doi.org/10.1007/s11229-015-1001-0)
6. [Journal Article] Howick J Webster RK, Macdonald H, Collins GS, Rees JL, Napadow V, Madigan C, Price A, Lamb SE, Bishop FL, Bokelmann K, Papanikitas A, Roberts N, Evers AWM, Hoffmann T (2020). TIDieR-Placebo: a guide and checklist for reporting placebo and sham controls. *PLoS Medicine*, 17(9): e1003294. DOI: [10.1371/journal.pmed.1003294](https://doi.org/10.1371/journal.pmed.1003294)

Key research awards

- Expectation Management for Patients in Primary Care: Developing and Feasibility Testing a New Digital Intervention for Practitioners / Dr Jeremy Howick (Co-I), Professor Hazel Everitt (PI, Southampton), Dr Felicity Bishop (Southampton), Professor Christian Mallen (Keele), Professor Paul Little (Southampton). National Institute for Health Research (NIHR) School for Primary Care Research (Project No. 389; FR 14). GBP394,262, 2018-2021.
- Dawkins and Strutt Grant / Dr Jeremy Howick, Professor Paul Aveyard (Co-PI, Oxford). British Medical Association. GBP60,000; 2017-2018 Awarded for conducting a systematic review of empathy interventions.
- National Institute for Health Research (NIHR) School for Primary Care Non-Clinical Fellowship / Dr Jeremy Howick, National Institute for Health Research (NIHR); GBP243,600; 2012—2015. Awarded for conducting interdisciplinary research on the nature and effects of empathic care.

4. Details of the impact (indicative maximum 750 words)

Informed and contributed to two clinical trials that improved patient health

Howick's research has led to a clinical trial designed for and reported in a BBC Horizon documentary on placebos (released 24 October 2018). Howick designed the trial placebo intervention which **led to a reduction in pain in almost all** of the 117 participants in the trial for at least three weeks [A]. One of the patients in the trial, age 71, had been wheelchair-bound for several years. He reports that the placebo helped him stop taking morphine and go for a boat ride. He notes: "I can't believe I've been taking nothing, yet I feel so wonderful" [B, page 4].

Howick helped design another placebo-controlled trial aimed to improve adherence to statin medication. Some people stop taking statins because they fear getting side effects like muscle pain. One of the causes of apparent mild muscle pain can be the expectation of pain (a nocebo effect). In the trial, patients who had stopped taking statins due to apparent intolerance were asked to alternate between placebos and statins, and report side effects. **33 patients have since resumed taking their statins**, reduced their cholesterol and lowered their risk of heart disease [C].

Changed public understanding of placebo and placebo-related effects

The back-pain trial described above was aired as a BBC Horizon documentary that had **1,940,000 viewers** on its first night. It was also widely reported in the media, including *The Guardian*, *The Telegraph*, *The Evening Standard*, and *The Daily Mail* (combined daily viewership of over 5,000,000). Many documentary viewers reported a change in understanding or behaviour. One viewer stated, "I encourage the medical profession to...encourage people away from pills" [B, page 5]. The documentary also provided the basis for a teaching resource on the 'Teachers Pay Teachers' website, which has been used by at least one teacher who reports: "As we continue learning about True Experimental Designs, this was a great supplemental resource for distance learning" [B, page 9].

Howick has also contributed to the public understanding of placebos via his bestselling book *Doctor You*. The book has been published in 8 languages (English, French, Italian, Polish, Romanian, Turkish, Chinese, and Slovenian), and has reached the top sales position on Amazon in the UK, US, and Canada, and was rated by the *Evening Standard* as a top 5 self-help book in 2017 [D]. It has been featured on *The Doctors* (US), the BBC news (UK), and it has received almost 100 reviews worldwide, including by some people who report a change in thinking [4]. A review on Amazon UK, for example, states, "I've found myself medication free and am self-managing headaches that have plagued me for years. Don't be fooled - I'm sure they are not totally gone, but they appear under control." [D, page 5] *Doctor You* has also **been used as a teaching resource** and is required reading on the Jagiellonian University psychology course (taught to up to 120 students whose exam includes a question based on it) [E].

More recently, the book generated an invitation to give a TEDx talk (10 July 2020). The talk has been viewed 8,885 times as of January 4th, 2021. Viewers were surveyed on social media to ask whether the talk improved their knowledge of nocebo effects. 44% of the 4,004 respondents claimed that the TEDx talk **introduced them to nocebo effects for the first time** [F].

Introduced guidance for reporting placebo controls within clinical trials

Howick led a team of international researchers (3 continents, 5 countries), to develop reporting guidelines to improve the description of placebo/sham controls within clinical trials. The guidelines have been endorsed by the Enhancing the QUALity and Transparency Of health Research (EQUATOR) Network, which is the leading international body governing reporting standards in clinical trials [G]. Top medical journals including the *BMJ*, *The Lancet*, and **the New England Journal of Medicine require that EQUATOR guidelines be followed** [G.ii], and the guideline has been explicitly endorsed by a number of journal editors [G.iii]. A senior editor at *PLOS Medicine* writes, "I can confirm that we will be asking

authors of relevant papers under consideration at *PLOS Medicine*...to use TIDieR-Placebo” [G.iii].

Enhancing empathy in medical students, professionals, and healthcare systems

Howick’s research showing that positive empathic communication can benefit patients formed the foundation for an empathy training course and the Oxford Empathy Programme in 2014. He has delivered empathy training to over 50 healthcare practitioners, and to students at Leicester Medical School. These training sessions have led to a change in the Leicester University Medical School curriculum. The Academic Clinical Lecturer in Medical Education at the University of Leicester Medical School writes, “the workshop [has] led to a better understanding of the role of empathy in the doctor-patient relationship and the benefits empathetic practice has on patient outcomes’ and that ‘[Howick’s] work with our students has also catalysed movements afoot to modify the empathy curriculum further.’ [H].

With partners from McGill University, Howick designed and co-facilitated a workshop to develop strategies for embedding empathy within the paediatric unit at the Montreal Children’s Hospital. The workshop led to changes ranging from required empathy training for staff, a buddy system, and better patient satisfaction indicators. The Division Chief, Montreal Children’s Hospital writes: “This invitation [to be honorary collaborator] recognizes your significant efforts in helping to create and foster our program in Healthcare Empathy. You enabled the scholarly aspects of this program in enhancing empathic practice while encouraging original research endeavours” [I].

Finally, preliminary data from a feasibility trial of an empathy intervention for healthcare practitioners (which Howick helped design), has shown that the practitioners report changing their practice. After doing the training, one general practitioner said, “When I looked at my video I could have improved on everything! Enlightening! Didn’t take long...Also a goal not to use the computer as much...[note to self to:] Stop frowning so much” [J, page 11].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- A. Published, peer reviewed report that documents the trial Howick designed and the reduction in pain among the trial participants: [Howick J, et al. \(2020\) BBC Horizon placebo back pain study: a public trial of the effectiveness of placebos. *European Journal for Person-Centered Healthcare*, 7\(4\), 650-655. <http://www.ejpch.org/ejpch/article/view/1787>](#)
- B. Report by REF Impact Facilitators December 2020 documenting evidence of changed public understanding of placebos from BBC Documentary
 - i. Comments from participants in documentary who took placebos
 - ii. Evidence of changed understanding on social media
 - iii. Ripple effect of the documentary in the media in *The Guardian*, *BBC News*, and the *Evening Standard* and others
 - iv. Use of documentary as a teaching resource
- C. Results of clinical trial (June 2019-May 2020) of statin nocebo trial demonstrating that 33 patients resumed statin therapy after observing that their cholesterol was reduced.
- D. Report by REF Impact Facilitator December 2020 on reach, sales, and impact of *Doctor You*.
 - i. Reviews from *Goodreads* and *Amazon* of readers
 - ii. Record of nomination as top 5 self-help book in *The Evening Standard* (URL provided)
 - iii. Evidence of translations (Italian, Polish, Romanian, French, Turkish, Chinese, and Slovenian)
 - iv. Record of media coverage (URLs provided), including on *BBC*, *The Guardian*, and *The Daily Mail*.

- E. Letter from Professor and degree coordinator for introductory psychology course at Jagiellonian University confirming use of *Doctor You* in the introductory psychology course and copy of psychology course curriculum, 13 July 2020.
- F. Report by REF Impact Facilitator of TEDx viewers and their responses to social media poll; video of the TEDx talk is available at https://www.youtube.com/watch?v=htu_6smUFSU
- G. Placebo/sham control reporting policy (TIDieR-Placebo)
- i. Evidence that TIDieR-Placebo features on the EQUATOR network website (<https://www.equator-network.org/reporting-guidelines/tidier-placebo/>). Accessed 4 January 2021.
 - ii. Evidence that medical journals, including most top medical journals (*BMJ*, *The Lancet*, *Journal of the American Medical Association*) endorse TIDieR-Placebo because it is officially endorsed by EQUATOR.
 - iii. Letters from two journal editors confirming that they officially require/encourage authors to use TIDieR-Placebo, October 2020.
- H. Letter from teaching lead at Leicester University Medical School indicating change in curriculum based on Dr Howick's training courses, 16 March 2020.
- I. Letter from head of Paediatric Intensive Care Unit at the Montreal Children's Hospital & Chair in Paediatric Medical Education at McGill University on the changes to the hospital system based on Dr Howick's workshop.
- J. Report of preliminary data from *Empathico* trial noting change in general practitioner attitudes towards empathy.