Impact Case Study (REF 3b)

Institution: Plymouth University

Unit of Assessment: UoA3

Title of case study: Advancing methods for prioritising health research

1. Summary of the impact (indicative maximum 100 words)

This case study highlights a body of research around health Research Priority Setting (RPS) that assists policy makers in effectively targeting research that has the greatest potential health benefit. Empirical research on RPS led to organizational changes, and new policies within the Cochrane Collaboration along with new training resources and new RPS exercises. A research gap on inequalities in the risk of oral cancer in the English South Asian population led to an evidence synthesis exercise being carried out by the National Institute for Health and Care Excellence (NICE) and the formulation of a new public health guideline.

2. Underpinning research (indicative maximum 500 words)

The research programme carried out by Moles, Professor of Oral Health Services Research (2009-present at Plymouth University) and Nasser, Clinical Lecturer in Evidence-Based Dentistry (2011-present at PU) is dedicated to reducing gaps between the research needs of the public and the research that actually gets conducted. Research Priority Setting (RPS) processes assist policy makers in effectively targeting research that has the greatest potential health benefit. This empirical research develops and evaluates approaches to identify and prioritise important research questions and monitors subsequent conduct, implementation and impact. The research has focussed on two specific approaches: (a) analysing health data to identify important research gaps to be addressed to reduce health inequalities, and (b) methodological approaches to identify and rank topics for systematic reviews.

Moles began analysing routinely collected health data at University College London in 1999 and has developed this at Plymouth since 2009. The early phase of the research demonstrated social and ethnic inequalities in oral cancer incidence in England [1] and social inequality in hospital admissions for dental conditions [2]. This unveiled crucial research gaps leading to the development of the research programme at PU with a focus on identifying important research gaps in relation to health inequalities and access to care. The programme was further expanded to explicitly incorporate RPS methodologies following the recruitment of Nasser to PU.

In a project started in 2008 and transferred to PU, Nasser has been evaluating RPS processes at organizational, stakeholder, and national levels. The project has been funded by the Cochrane Collaboration (CC) with international collaborators to research the CC's RPS processes [3]. The Cochrane Collaboration is a not-for-profit international network of more than 28,000 people from over 100 countries working to help healthcare practitioners, policy-makers, patients, their advocates and carers make well-informed decisions about health care, by preparing, updating, and promoting the accessibility of Cochrane Systematic Reviews (CR).

To address the challenge identified by Moles on research gaps in relation to social inequalities, Nasser developed an 'equity lens' to better inform the development and evaluation of RPS exercises [4]. This was used to evaluate the equity of the CC's RPS processes. For stakeholder groups, Nasser's research developed an innovative approach combining RPS processes with patient involvement and routinely collected health data to prioritize topics in Germany for rapid health technology assessment [5]. Nasser and Sawicki (IQWiG) were commissioned by the Commonwealth Fund as one of four groups to evaluate the evidence for policy-making, including the RPS process, in the UK, Germany, Australia and France [6]. The results of the research programme, along with those of other research groups, were presented at an international

workshop hosted and funded by PU in 2012.

The research collaboration of Moles and Nasser identified gaps and developed a first version of a conceptual framework on RPS that is being used to conduct an extensive systematic review with thematic analysis of RPS methodologies to evaluate the influence and impact of RPS methods on the research pathway.

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

All articles are published in peer reviewed journals. Plymouth University based authors are marked in bold.

1. **Moles DR**, Fedele S, Speight PM, Porter SR, dos Santos Silva I. Oral and pharyngeal cancer in South Asians and non-South Asians in relation to socioeconomic deprivation in South East England. *Br J Cancer*. 2008 Feb 12;98(3):633-5. doi: 10.1038/sj.bjc.6604191. 15 citations (Web of Science 14th June 2013). Impact Factor 5.042.
2. **Moles DR**, Ashley P. Hospital admissions for dental care in children: England 1997-2006. *Br Dent J*. 2009 Apr 11;206(7):E14; discussion 378-9. doi:10.1038/sj.bdj.2009.254.11 citations (Web of Science 14th June 2013)
3. **Nasser M**, Welch V, Tugwell P, Ueffing E, Doyle J, Waters E. Ensuring relevance for Cochrane reviews: evaluating processes and methods for prioritizing topics for Cochrane reviews. *J Clin Epidemiol*. 2013 May; 66 (5):474-82. doi: 10.1016/j.jclinepi.2012.01.001. 2 citations (Web of Science 14th June 2013)
4. **Nasser M**, Ueffing E, Welch V, Tugwell P. An equity lens can ensure an equity-oriented approach to agenda setting and priority setting of Cochrane Reviews. *J Clin Epidemiol*. 2013 May; 66 (5):511-21. doi: 10.1016/j.jclinepi.2012.11.013.1 citation (Web of Science 14th June 2013)
5. Bastian H, Scheibler F, Knelangen M, Zschorlich B, **Nasser M**, Waltering A.Choosing health technology assessment and systematic review topics: the development of priority-setting criteria for patients' and consumers' interests. *Int J Technol Assess Health Care*. 2011 Oct; 27(4):348-56.
6. Chalkidou K, Tunis S, Lopert R, Rochaix L, Sawicki PT, **Nasser M,** Xerri B. Comparative effectiveness research and evidence-based health policy: experience from four countries. *Milbank Q*. 2009 Jun;87(2):339-67. doi: 10.1111/j.1468-0009.2009.00560.x.45 Citations (Web of Science, 14th June 2013). Impact Factor 3.872

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

The research had a direct impact on decisions by health service and regulatory authorities.
As part of its pathway of impact, the research programme targeted the National Institute for Health and Care Excellence (NICE) as a key health and regulatory authority impact target. It also considered the Cochrane Collaboration (CC) as a strategic intermediate target since Cochrane Systematic reviews are used to inform NICE clinical guidelines. In August 2011, 731 Cochrane Reviews were used in 106 NICE guidelines [1].

The research on the factors RPS exercises need to achieve in order to maximize the impact of systematic reviews led to an *organizational change* in the Cochrane Collaboration. It formed the basis for developing a new Methods Group within the CC: the Cochrane Agenda and Priority Setting Methods Group (launched in 2011). This Group acts to translate the aforementioned research into policy guidance for research units within Cochrane [2]. The policy guidance is directed at all 14 Cochrane Centres and to 19 Branches in 30 countries, along with 53 review groups and 13 fields and networks. The importance of the research was recognized by CC awarding it the Bill Silverman Prize in 2012 and by Dame Sally Davies at the UK & Ireland Cochrane Contributors meeting in March 2013 highlighting this as a key development in Cochrane to ensure that Cochrane reviews are relevant to the needs of the NHS [3,4].

Our research group shared the results of the projects, as they were conducted through workshops to communicate key issues that emerge, to raise awareness, and to increase public engagement in research. In an initial survey in 2008, only half of the Cochrane review groups and fields that responded (79% response rate) had a process in place for setting priorities. Afterwards, all 53 review groups were required to develop and report an approach for prioritization: an overview of the 2010 report is available online [2]. Some of the groups were informed by the awareness activities of our research unit and others directly used the research when developing their processes. One of the latter groups, the Cochrane Musculoskeletal Review Group, published their work in a peer reviewed journal [5].

Beyond the impact achieved through the targeted approach, the peer-reviewed publications and conference presentations were picked up by several organizations and led to additional impact. The research that identified the link between the incidence of oral and pharyngeal cancer in English South Asian communities and the prevalence of smokeless tobacco usage from the Health Survey for England unveiled a research gap around health inequality and its association with a risk behaviour that was picked up by NICE, which decided to conduct a new technology assessment. This directly contributed to the decision by NICE to conduct a formal systematic evaluation of smokeless tobacco cessation technologies between 2011 and 2012 in order to identify the most appropriate prevention strategies for incorporation within its public health guidance published in 2012 [6] to provide support specifically targeted at people in South Asian communities. The NICE guideline, in which this research is referenced under the section on Public Health Need and Practice, helps people of South Asian origin who are living in England to stop using traditional South Asian varieties of smokeless tobacco. Therefore, the research also had a consequent impact in informing public health prevention strategies.

In 2012, Cochrane Canada and Pan American Health Organisations (PAHO) approached us to develop and organise online training resources on research priority setting informed by the RPS research. These resources are available online at no cost to all global health researchers and Cochrane groups [7]. The UK Cochrane Centre requested an additional training session for the 25 UK-based Cochrane groups that was organized in the UK and Ireland Cochrane Contributor Meeting for 2013 and it was used to develop training resources on RPS Methods for the Yorks and Humber Research Design Service, part of the NHS that supports researchers to develop and design high quality research proposals [8,9]. Following the publication of the results, NETSCC/NIHR has approached the unit for advice on using the research to inform their processes. This led to a new research grant proposal to test and pilot these results in their institute along with NICE and the Association of Medical Charities. This is currently under evaluation by the Medical Research Council.

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

1. Alderson P, Tan T. The use of Cochrane Reviews in NICE Clinical Guidelines. The Cochrane Library. August 09, 2011. http://www.thecochranelibrary.com/details/editorial/1312103/The-use-of-Cochrane-Reviews-in-NICE-clinical-guidelines.html. Editorial by members of NICE describing the use of Cochrane Reviews in NICE Clinical Guidelines.
2. Cochrane Agenda and Priority Setting Methods Group http://capsmg.cochrane.org. The official website of this new entity in the Cochrane Collaboration. In addition to this, the information on the priority setting approaches in Cochrane Groups in 2010 is available here: http://capsmg.cochrane.org/approaches-used-cochrane-review-groups-prioritization. The first survey was published as part of the peer reviewed publication (Ref 4- in under pinning research section)
3. The Bill Silverman Prize http://www.cochrane.org/about-us/awards-scholarships-funding-initiatives/annual-prizes-and-awards/bill-silverman-prize.
4. Keynote speech from Dame Sally Davies at the Opening Plenary, Cochrane UK & Ireland 21st Anniversary Symposium. The importance of the setting up of the Cochrane Agenda

and Priority Setting Methods Group in the production of timely evidence is stated from 34:00. http://youtu.be/OALmCIY-v7k
5. Jaramillo A, Welch VA, Ueffing E, Gruen RL, Bragge P, Lyddiatt A, Tugwell P. Prevention and self-management interventions are top priorities for osteoarthritis systematic reviews. J Clin Epidemiol. 2012 Sep 17. doi:pii: S0895-4356(12)00219-3. 10.1016/j.jclinepi.2012.06.017. [Epub ahead of print] PubMed PMID: 22995854. The research paper states in the background that they have reviewed the evaluation on research priority setting methods in Cochrane and developed a new approach for priority setting topics for Cochrane Reviews based on the gaps that were identified and needs to be addressed.
6. Smokeless tobacco cessation – South Asians. National Institute for Health and Clinical Excellence (NICE) Public Health Guideline. Sep 2012. Cited by NICE in Public Health Guideline 39 as part of the evidence underpinning the need for the research synthesis and guideline development. http://guidance.nice.org.uk/PH39 Page 20.
7. RPS webinars available on the Cochrane Canada website http://ccnc.cochrane.org/cochrane-canada-live-webinar-archive
8. Master Class on Research Priority setting in UK and Ireland Cochrane Contributor Meeting http://capsmg.cochrane.org/master-class-priority-setting-and-patient-engagement-march-21-2013
9. Letter from the workshop organizers of the Yorks and Humber Research Design Service.