

## Impact case study (REF3b)

<b>Institution:</b> King's College London
<b>Unit of Assessment:</b> UoA3 - Nursing
<b>Title of case study:</b> Global maternal health – Improving access to maternity care in developing countries
<p><b>1. Summary of the impact</b></p> <p>The Millennium Development Goals placed improvement of maternal health and reduction of maternal mortality high on global policy agendas. Our research at King's College London takes this aim forward by producing detailed analyses of health systems barriers to timely access to maternal healthcare in a variety of settings in Africa and Asia, complemented by synthetic reviews of evidence to inform governments and international agencies. Our contribution has drawn international policy attention to the impact of healthcare financing mechanisms on delivery of maternity care and subsequent wellbeing, and the importance of effective emergency maternity referral systems. Our work has directly informed the design of referral systems in several countries.</p>
<p><b>2. Underpinning research</b></p> <p>Since 2003, Dr Susan F Murray (Senior Researcher/Senior Lecturer/Reader in International Healthcare, 2002-present) and colleagues at King's College London (KCL) have developed a programme of research on the effects of the way maternal healthcare is paid for. Research has focused on improving access to maternity care in developing countries. It examines social, economic and structural barriers to access to maternal health care and innovations to improve access.</p> <p>This programme began with studies commissioned by the UK Department for International Development (DFID) on the role of private maternity services in low- and middle-income countries. Researchers at KCL led the case study in Tanzania, a country where fewer than half of all births are assisted by professionals. Recent legislation in Tanzania had liberalised the ownership of healthcare facilities to allow for private sector expansion. We co-wrote a comparative overview of Nepal, Tanzania and Andhra Pradesh, India with Options, a reproductive health consultancy that works with DFID. Key findings included the rapid growth of private sector activity, over-medicalised practice and high Caesarean section rates in private medical facilities. In 2003, Dr Murray also obtained funding from the Health Foundation for a 9-district comparative case study of the effect of the Tanzanian legislation on independent midwifery practice and on coverage of deliveries with skilled attendance. We found that the legislative changes had facilitated development of maternity homes run by retired nursing officers in peri-urban and rural areas. These had potential for improving coverage of births by skilled attendants without over-medicalisation, but over-restrictive accreditation criteria resulted in high set-up costs and reduced access in poor communities (Ref 1).</p> <p>In subsequent longitudinal qualitative research in Burkina Faso, (undertaken in collaboration with AfricSanté and the London School of Hygiene and Tropical Medicine), we examined the long-term impact on poor women and their households of fees charged by public hospitals for the treatment of serious obstetric complications. We found that women survived thanks to medical intervention but incurred significant and sometimes catastrophic financial and social costs (Refs 2 &amp; 3).</p> <p>Following earlier research in Africa on barriers to access and metrics for maternity referral (Ref 4), Dr Murray was asked in 2004 to conduct a review of evidence on referral systems in developing countries for the World Health Organization and the United Nations Millennium Project. This was one of a series of commissioned background papers on issues of equity and health systems for mother and child health. From this review, in 2006 we published what became known as the 'Murray &amp; Pearson framework' identifying the nine requisites for successful maternity referral systems (Ref 5), which was widely taken up to guide programming.</p>
<p><b>3. References to the research</b></p> <p><b>Ref 1</b> Rolfe B, Leshabari S, Rutta F, Murray SF. The crisis in human resources for health care and the potential of a 'retired' workforce: case study of the independent midwifery sector, Tanzania. <i>Health Policy &amp; Planning</i> 2008; 23: 137–49. doi:10.1093/heapol/czm049 ( Scopus citations 5)</p> <p><b>Ref 2</b> Storeng K, Murray SF, Akoum MS, Ouattara F, Filippi V. Beyond body counts: a qualitative study of lives and loss in Burkina Faso after 'near-miss' obstetric complications. <i>Social Science and Medicine</i> 2010 published online 31 May doi:10.1016/j.socscimed.2010.03.056 (Scopus citations</p>

10)

**Ref 3** Murray SF, Storeng K, Akoum M. Capitals diminished, denied, mustered and deployed. Women's four year trajectories after acute health crisis, Burkina Faso. *Social Science and Medicine* 75(12):2455-62. doi:10.1016/j.socscimed.2012.09.025. (Scopus citations 0)

**Ref 4** Murray SF, Davies S, Phiri RK, Ahmed Y. Tools for monitoring the effectiveness of district maternity referral systems. *Health Policy and Planning* 2001:16(4):353-61. doi: 10.1093/heapol/16.4.353 (Scopus citations 20)

**Ref 5** Murray SF, Pearson S. Maternity referral systems in developing countries: current knowledge and future research needs. *Social Science and Medicine* 2006: 62(9): 2205-15. <http://dx.doi.org/10.1016/j.socscimed.2005.10.025> (Scopus citations 30)

#### Supporting grants

- Demand side financing measures in maternal healthcare in low- and middle-income countries, systematic review. AusAID Australian Development Research Awards 2010. PIs: Murray, Bick. US\$100,000. 2011-12.
- Effects of obstetric complications and their costs on long-term economic and social well-being of women and their families, Burkina Faso. ESRC & Hewlett Foundation. Murray Co-Investigator and KCL lead. £393,995. 2008-10.
- The processes and stakeholder politics of health policy and change. The British Academy. Murray Co-Investigator and KCL lead. SG-45248. £7,500. 2007.
- Maternity referral systems in developing countries: challenges and next steps Scoping review for Task Force 4 United Nations Millennium Project / World Health Organization. PI: Murray. \$US 7,000. 2004.
- Midwifery Practice in the Private Sector in Tanzania: Policy and Programme Implications for Maternal and Newborn Health Services. The Health Foundation. PI: Murray PI. £160,625. 2003-5.
- Exploring the Role of Private Maternity Services in Tanzania, Nepal and Andhra Pradesh, India. DFID. Murray Co-Investigator and KCL lead. £9,000. 2003.

#### 4. Details of the impact

Our research at KCL has contributed social science perspectives on health systems and high quality qualitative methodologies to a field previously dominated by clinical obstetrics and demography. We were among the first to highlight the importance of analysing the expansion of private sector provision in maternity care in developing countries and of understanding the impact of 'who pays for care' on how it is accessed and delivered. KCL research on the key requisites of a functioning referral system for maternity care in developing countries has led the field and has been taken up in many different countries.

#### ***Changing policy to support independent midwifery practice for poor communities in Tanzania***

Our detailed analysis of the independent midwifery sector and its potential for improving coverage of 'skilled attendance' at birth in rural and peri-urban Tanzania stimulated policy debate on the range of provision in the country. We disseminated our findings nationally in Tanzania via a briefing (English and Kiswahili) and a short film, which was distributed on DVD to all District Medical and Nursing Officers (1A). We also convened a technical meeting of the Tanzania Nurses and Midwives Council with the Ministry of Health and other stakeholders to present the findings and stimulate debate. A significant outcome of this meeting was the agreement on modifications to the *Standards and Conditions for Establishing and Operating Private Nursing and Midwifery Homes in Tanzania* aimed at reducing the cost to midwives of setting up maternity homes (1B). Furthermore, through bringing together the various key policymakers and professional bodies in Tanzania in a novel way, it drew the policymakers' attention to the potential role of independent midwives and thereby acted as a catalyst which opened the door for the first time to incorporation of independent midwives in Tanzania's national maternal health programming. For example, the independent midwives' organisation in Tanzania 'PRINMAT' was subsequently included in the Public Private Partnership for the National Road Map Strategic Plan to accelerate reduction of maternal, newborn and child deaths in Tanzania for 2008-15 (1C) and the services of PRINMAT were included in the provisions of the National Health Insurance Fund of Tanzania.

**Impact case study (REF3b)**

Our research also influenced activities of international NGOs such as the Netherlands Catholic Organisation for Relief and Development Aid (CORDAID) (1E), which acted to reduce the cost of delivery care provided by the independent midwives via a performance-based financing project for the owners of maternity homes in Tanzania, extending this contract in 2009 with the aim of increasing the number of deliveries by independent midwives to 9,000 per annum by 2010/11.

***Catalysing and informing international policy focus on referral systems in maternity care***

Our research and review of evidence on maternity referral systems (Ref 5) informed the UN Millennium Project and provided underpinning to Chapter Four of *Who's got the power? Transforming health systems for women and children*, the key 2005 report of the UN Millennium Task Force on Child health and Maternal health (2A). The findings of our review and the 'Murray & Pearson framework' (Ref 5) have been used in the past few years to inform design of assessments of referral systems in many settings including Ghana (2B), Bangladesh (2C), Armenia (2D), and Ethiopia (2E).

Examples of use by global policy institutions include two influential international meetings held during 2010. As part of the *Maternal Health Dialogue Series*, the Woodrow Wilson International Center for Scholars' Global Health Initiative, in collaboration with the Maternal Health Task Force, UN Population Fund, US Agency for International Development and Columbia University, convened a technical meeting with 25 experts from five countries, including those from KCL, to extend understanding of emergency referral, especially the coordination of emergency transportation systems that directly facilitate the swift physical movement necessary for effective referral (3A). Also in 2010, the "Rethinking Referral Systems" consultation was co-convened in New York by the Bill & Melinda Gates Foundation with the Averting Maternal Death and Disability Programme. This meeting, at which Dr Murray was a key speaker, brought together 50 international experts from UN agencies, major funders and national health policy makers concerned with key components of emergency referral systems including maternal-newborn health, transportation, public works, mobile technologies, and emergency medicine (3B).

***Guiding UK and other donor government policy on maternal health in developing countries***

In 2009 DFID and NORAD (the Norwegian Agency for Development Co-operation) jointly commissioned a comprehensive review of global evidence upon which to draw when advising their respective governments on the best strategies to secure the achievement of Millennium Development Goal 5 (maternal health). On the basis of her expertise in the field Dr Murray was asked to co-author, with Options, the review of evidence about what makes a difference to maternal health, what is good practice, what needs to improve and where further information is needed to make a judgement (4A). This review has been used to guide UK government policy on maternity care, family planning and safe abortion in developing countries. This is evidenced by a statement by Baroness Verma in the House of Lords on 11 Feb 2011 that this was one of five key documents guiding work on family planning, and that it had been distributed to all DFID country offices as well as being placed in the Library of the House of Lords (4B). Further evidence of use by DFID country offices in informing the design of maternal health interventions is indicated by reference to it made in documentation, such as that of the Pakistan Maternal and Newborn Health Research and Advocacy Fund, a five year national programme co-funded by DFID and AusAID which aims to support research and advocacy initiatives to influence pro-poor policy and practice reform related to maternal and newborn health in Pakistan (4C). Influence on policy debates on aid priorities further afield is also evident in citation by the Anglican Church of Australia's Public Affairs Commission 2011 submission to the Australian Government's Independent Review of Aid Effectiveness (4D).

**5. Sources to corroborate the impact**

- 1) Changing policy to support independent midwifery practice for poor communities in Tanzania
  - A. DVD use to disseminate key findings:  
[http://www.youtube.com/watch?v=RQQY\\_Gn98\\_g&feature=youtube](http://www.youtube.com/watch?v=RQQY_Gn98_g&feature=youtube)
  - B. Amended Standards and Conditions for Establishing and Operating Private Nursing and Midwifery Homes in Tanzania (2007):  
<http://burhaniinfosys.com/projects/tnmc/images/stories/A%20-%20Standard%20and%20conditions%20for%20private%20practice%20DEC2007.pdf>

## Impact case study (REF3b)

- C. The National Road Map Strategic Plan To Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania 2008-15:  
[http://www.unfpa.org/sowmy/resources/docs/library/R224\\_MOHTanzania\\_2008\\_Roadmap\\_MNCH.pdf](http://www.unfpa.org/sowmy/resources/docs/library/R224_MOHTanzania_2008_Roadmap_MNCH.pdf)
- D. Research influence on programme of the Netherlands Catholic Organisation for Relief and Development Aid (CORDAID) in Tanzania as cited in PP032 Rietsema & Hardeman paper for the Geneva Forum Towards Global Access to Health:  
<http://sfu.ca/~dlaitsch/presentations/2006/Geneva/abstracts.pdf> (see page 130)  
with extended programme of support in 2009:  
[http://www.primat.org/index.php?start\\_from=6&ucat=&archive=&subaction=&id=&](http://www.primat.org/index.php?start_from=6&ucat=&archive=&subaction=&id=&) (see Events and Highlights 14 April 2009)
- 2) Examples of take-up of the research on maternity referral systems in a variety of countries
- A. UN Millennium Task Force on Child health and Maternal health:  
<http://www.unmillenniumproject.org/documents/maternalchild-complete.pdf>
- B. Ghana 2010: Presentation by John Koku Awoonor-Williams Transportation and Referral for Maternal Health within the CHPS System in Ghana:  
<http://www.wilsoncenter.org/sites/default/files/JK%20Awoonor%20Williams%20Presentation.pdf>
- C. Bangladesh 2010: Assessment report for UNFPA by Morsheda Banu et al of the BRAC community-based health programme in urban slums of Bangladesh supported by the Bill and Melinda Gates Foundation Assessing the MANOSHI Referral System Addressing Delays in Seeking Emergency Obstetric Care in Dhakas Slums:  
[http://www.unfpa.org/sowmy/resources/docs/library/R265\\_Banu\\_etal\\_2010\\_Bangladesh\\_MA\\_NOSHI\\_assessment.pdf](http://www.unfpa.org/sowmy/resources/docs/library/R265_Banu_etal_2010_Bangladesh_MA_NOSHI_assessment.pdf)
- D. Armenia 2009: G Panajyan & K Baghdasarova report. Armenian Maternal And Child Health Referral System Assessment 2009, funded by the United States Agency for International Development: [http://pdf.usaid.gov/pdf\\_docs/PNADP128.pdf](http://pdf.usaid.gov/pdf_docs/PNADP128.pdf)
- E. Ethiopia 2010: Family Health International and Averting Maternal Disability and Death programme. Presentation by Caleb Parker Modelling referral networks to avert maternal death in Ethiopia:  
[http://proceedings.esri.com/library/userconf/health10/docs/esri\\_health\\_2010\\_eth\\_referral\\_networks.pdf](http://proceedings.esri.com/library/userconf/health10/docs/esri_health_2010_eth_referral_networks.pdf)
- 3) Examples of take-up of the research on maternity referral systems by international institutions and contribution to policy debate
- A. The *Improving Transportation and Referral for Maternal Health* May 19, 2010, at the Woodrow Wilson International Center for Scholars (WWICS) in Washington, D.C and organized by the Maternal Health Task Force, WWICS, UNFPA, Averting Maternal Death and Disability Program (AMDD)/Columbia University, and USAID:  
<http://www.wilsoncenter.org/sites/default/files/Transport%20Referral%20Meeting%20Technical%20Report.pdf>
- B. "Rethinking Referral Systems" Co-convened by the Bill & Melinda Gates Foundation and AMDD, an intensive expert working meeting held 30 November - 02 December 2010:  
[http://www.amddprogram.org/d/content/rethinking-referral-systems#key\\_meeting\\_documents](http://www.amddprogram.org/d/content/rethinking-referral-systems#key_meeting_documents)
- 4) Guiding UK and other donor government policy on maternal health in developing countries
- A. Hulton L, Murray SF, Thomas D. *The Evidence Towards MDG 5: A Working Paper* 2010 Commissioned by NORAD and DFID UK Department for International Development  
<http://www.dfid.gov.uk/R4D/evidencepapers.asp>
- B. Hansard:  
<http://www.publications.parliament.uk/pa/ld201011/ldhansrd/text/110211w0001.htm>
- C. Pakistan: The Maternal and Newborn Health Research and Advocacy Fund:  
<http://www.rafpakistan.org/userfiles/Approach%20and%20Guidance%20.pdf>
- D. Submission to the Australian Government's Independent Review of Aid Effectiveness:  
[www.aidreview.gov.au/publications/sub-apac.doc](http://www.aidreview.gov.au/publications/sub-apac.doc)