Institution:
UNIVERSITY OF LIVERPOOL

Unit of Assessment:
UOA4 - Psychology, Psychiatry and Neuroscience

Title of case study:
Improving Clinical Outcomes by Improving Health Care Communication

1. Summary of the impact

Since 1992 and 2004 respectively, Salmon and Young at the University of Liverpool (UoL) have led work which has influenced national and international guidelines and practitioner practice in two areas of clinical communication: first, reducing iatrogenic effects during practitioner consultations with patients with ‘unexplained symptoms’; and second, modifying practitioner behaviour to increase recruitment of children to clinical trials. The research has influenced the Royal Medical Colleges’ reports and guidelines, NIHR practice guidelines, and several regional NHS policy documents. It has also had international impact on an NIH-funded clinical trial. The group has increased public awareness of these issues through podcasts and patient information publications.

2. Underpinning research

The programme began in 1992 when Salmon (Professor since 1997) joined the UoL, expanding when Young joined in 2004 (Professor since 2011). With more than 300m GP and 13m outpatient consultations in England annually, the potential for improving healthcare by consultation training and guidance for practitioners is enormous. The programme examines how clinical communication meets or thwarts clinical and psychological needs of patients with physical illness. The research has two defining characteristics: (i) Detailed observation of clinical practice challenges taken-for-granted assumptions about healthcare communication (the most downloaded paper in Medical Education in 2011 was Salmon and Young’s critique of communication education); (ii) Quantitative and qualitative methodological development to analyze the mutual influence of practitioners and patients.

Research on communication in primary care was led by Salmon since 1994, including Dowrick (UoL) and Morriss (UoL to 2006) and funded by 3 MRC grants and one continuing NIHR programme. It focused on GP-patient interactions about medically unexplained symptoms because of the health and economic burden of these conditions. The prevailing view - that these problems arose from somatisation of emotional distress – was the basis for the first trial. However, targeting patients’ distress did not reduce symptoms. Our nested analysis of patients’ accounts suggested why - symptoms had arisen out of iatrogenic clinical communication, not somatisation of distress [1]. With the second grant, observational cohort studies confirmed that somatisation was a social process: GPs’ communication was often iatrogenic, increasing patient dependency [2]. Finally, a RCT showed that, currently recommended training for GPs (reattribution) could change their communication style, but training needed to incorporate lessons of the observational research if patients were to benefit. For example, GPs’ explanations needed to broaden to include cultural and physiological explanations, not just psychosocial ones [3].

Another thread to the research programme, established in 2007, focuses on the needs of patients and families when children are treated for severe illness. Within this programme Young led a UoL team including Williamson (UoL) and Smyth (UoL to 2012) to tackle the single biggest challenge facing development of an evidence-base to enhance children’s medical treatment – recruitment to clinical trials. Decades of failure to involve child patients in medical research has excluded them from benefits that evidence-based healthcare has given adult patients, and often left doctors with no choice but to use treatments without evidence of effectiveness or safety in children. They were funded by NIHR to investigate psychosocial processes in recruiting children to trials in order to inform strategies to optimise their enrolment. Before this UoL research it was assumed that parental reluctance was the main source of recruitment difficulties, but the findings challenged this. Whereas parents consistently wanted to be approached about a trial if their child was eligible, doctors and nurses regarded the recruitment process as a burden for families and were uncomfortable about recruiting children. The findings indicated that educating practitioners about families’ perceptions of trials [4] and addressing practitioner discomfort about recruitment [5,6] will be crucial in improving the evidence-base for children’s healthcare.

3. References to the research

The following papers are the reports arising from the principal grants supporting this research.

1. **Salmon P**, **Peters S**, **Stanley** I. Patients' perceptions of medical explanations for somatisation disorders: qualitative analysis. *British Medical Journal* 1999;318(7180):372-376.doi: 10.1136/bmj.318.7180.372 Citations: 164 Impact Facto: 17.215. Research output from MRC grant to P Salmon (PI), I Stanley, M Rose Physical exercise as a treatment for somatically manifest depression in primary care. Sponsor – University of Liverpool; 1994-1996; £94,000

2. **Ring A**, **Dowrick C**, **Humphris G**, **Salmon P**. Do patients with unexplained physical symptoms pressurise general practitioners for somatic treatment? A qualitative study. *British Medical Journal* 2004;328(7447):1057-1060. DOI: 10.1136/bmj.38057.622639. Citations: 69 Impact Factor: 17.215. Research output from MRC grant to P Salmon (PI), C Dowrick, G Humphris, A Hak. Patients' influence on treatment decisions when physical symptoms are presented without physical pathology; Sponsor – University of Liverpool;1999-2002; £162,000

3. Morriss R**, Gask L,** Dowrick C**, Dunn G,** Peters S**,** Ring A**,** Davies J**,** Salmon P**. (2010)** Randomised trial of reattribution on psychosocial talk between doctors and patients with medically unexplained symptoms. *Psychological Medicine*, 40, 325-333 DOI: 10.1017/s0033291709990353. Citations: 5 Impact Factor: 5.587. Research output from MRC grant to R Morriss (PI), C Dowrick, L Gask, P Salmon, B Lewis, G Dunn, F Creed, A Rogers, S Peters. Exploratory randomised controlled trial of training general practitioners to manage patients with persistent medically unexplained symptoms; Sponsor – University of Liverpool; 2002-2006; MRC; £397,000

4. **Byrne-Davis LMT**, **Salmon P**, **Gravenhorst K,** Eden T, **Young B**. (2010) Balancing high accrual and ethical recruitment in paediatric oncology: a qualitative study of the 'look and feel' of clinical trial discussions: *BMC Medical Research Methodology*, 10, 101 (doi:10.1186/1471-2288-10-101). Citations: 1 Impact Factor: 2.211. Research output from CRUK grant to Young B (PI), Hill JW, Eden T, Salmon P. Relationships between parents and practitioners regarding children with leukaemia: the Rapport study; Sponsor - University of Liverpool; 2006-2009; £227,632

5. **Shilling V**, **Williamson PR**, **Hickey H**, **Sowden E**, **Beresford MW**, **Smyth RL**, **Young B** (2011). Communication about children's clinical trials as observed and experienced: qualitative study of parents and practitioners. PLoS One 6(7): e21604. Citations: 8 Impact Factor: 3.730. Research output from NIHR (HTA) grant to Young B (PI), Williamson P, Smyth R, Hickey H. Processes in recruitment to randomised controlled trials of medicines for children (RECRUIT); Sponsor - University of Liverpool; 2007-2010; £274,232

6. **Shilling V**, **Williamson PR**, **Hickey H**, **Sowden E**, **Smyth RL**, **Young B**. (2011) Processes in recruitment to randomised controlled trials of medicines for children (RECRUIT): a qualitative study. *Health Technology Assessment* 15:15. Citations: 7 Impact Factor: 4.028. Research output from NIHR (HTA) grant to Young B (PI), Williamson P, Smyth R, Hickey H. Processes in recruitment to randomised controlled trials of medicines for children (RECRUIT); Sponsor - University of Liverpool; 2007-2010; £274,232

4. Details of the impact

In primary care the UoL strategy led, first, to editorials in both BMJ (doi:205; 10.1136/bmj.330.7481.4) and Lancet 2006 (2006: doi:10.1016/S0140-6736(06)68155-5; and 2007: doi:10.1016/s0140-6736(07)60159-7y) highlighting the clinical importance of the UoL's work in showing how practitioners contributed to the burden of unexplained symptoms. Each highlighted the implications for how routine consultations should be conducted. This, coupled with the success of the UoL's publication strategy (sustained output of papers in BMJ and other high-impact journals over several years), provided the endorsement that, over subsequent years, led to adoption of the findings in practice guidelines. At a national level, the work shaped the joint Royal College of General Practitioners and Royal College of Psychiatrists Working Group on 'management of patients with physical and psychological problems in primary care' and the resulting report and guidance that the Colleges published in 2009 [7]. This guidance emphasised that doctors' first task in managing these problems is to avoid the iatrogenic processes that the UoL work had demonstrated, and it used the work to show how doctors can turn consultations to psychological issues without alienating patients. It highlighted the distinction between 'explanation', which has the potential to be therapeutic, and 'normalisation', which is likely to be iatrogenic. It draws explicitly from UoL work in specifying how GPs should construct and provide these explanations. The report cites 9 UoL papers (the largest number from any research group). The Forum for Mental Health in Primary Care, jointly hosted by the same two Colleges, issued further Guidance for Health Professionals on Medically Unexplained Symptoms in 2011 [8]. Again, this was heavily influenced by the UoL work, with 9 citations, and reiterated that the solution to the problem of unexplained symptoms lies primarily in practitioners themselves, rather than in the patients. We have also influenced practice and understanding around unexplained symptoms through sustained presentation at educational and professional fora and with patient groups. The findings about what patients need from their GPs are included in one of the consistently most highly accessed of patient-oriented websites (www.patient.co.uk), a BMA 'Highly Commended Resource' [9].

With funding from the MRC Network for Trials Methodology Research, in 2011 Young led a team of 11 influential researchers (from the Universities of Liverpool, Sydney, Oxford, King's College London, Newcastle, Birmingham, Brunel, London School of Hygiene and Tropical Medicine, and Great Ormond Street Children's Hospital and the Royal College of Paediatrics and Child Health) in running a workshop on recruitment to paediatric trials. The workshop was attended by 115 delegates, including many NHS practitioners. It enabled the UoL team to engage in dialogue with practitioners about how families wanted to be approached about clinical trials and about practitioner discomfort in approaching families. Practitioner feedback overwhelmingly indicated that the findings had challenged their assumptions and would influence their practice. Since the workshop, the findings from the UoL research have been rapidly taken up by governmental, professional and policy making bodies. NIHR has included them on its website as a resource for practitioners involved in clinical research studies [10] and the reach of the UoL work was extended by presenting the findings to practitioners involved in recruiting other vulnerable patient groups to clinical trials (e.g. stroke patients and patients receiving end of life care). The findings are cited in '"Turning the Tide": Harnessing the power of child health research' [11], a report by the Royal College of Paediatrics and Child Health on how to strengthen child health research in the UK, and are also influencing guidance on ethical practice in clinical research that is currently under development by the College [12].

In 2011, Young was invited to advise members of the US *National Institutes of Health* (Neurological Disorders and Stroke) on recruitment to an NIH-funded international trial of treatments for Duchenne muscular dystrophy (the FOR-DMD trial) [13] and to contribute to a *National Research Ethics Service* training workshop for ethics committee members and practitioners in the same year [14]. Through a podcast given by Young for the 2012 International Clinical Trials Day, which was facilitated by her involvement in the MRC North West Hub for Trials Methodology Research and hosted by the Cochrane Collaboration [15], the findings are also contributing to public awareness of clinical trials.

5. Sources to corroborate the impact

Each source listed below provides evidence for the corresponding numbered claim made in section 4 (details of the impact).

7. The management of patients with physical and psychological problems in primary care: a practical guide. Report of a joint working group of the Royal College of General Practitioners and the Royal College of Psychiatrists.

http://www.rcpsych.ac.uk/files/pdfversion/CR152x.pdf

8. RCGP and RCPsych Guidance for health professionals on medically unexplained symptoms http://www.rcgp.org.uk/clinical-and-research/clinical-resources/~/media/Files/Policy/Mental%20health%20forum/Guidance-for-health-professionals-on-medically-unexplained-symptoms-MUS-Jan-2011.ashx

9. Patient Information Publications (www.patient.co.uk): http://www.patient.co.uk/doctor/Medically-Unexplained-Symptoms-(Assessment-and-Management).htm

10. NIHR guidance for clinical practitioners involved in recruiting children to clinical trials http://www.crncc.nihr.ac.uk/about_us/ccrn/specialty/paediatrics/Paediatric+Research+Resources.htm

11. “Turning the Tide”: Harnessing the power of child health research, report by the Royal College of Paediatrics and Child Health Commission on Child Health Research – see page 71 http://www.rcpch.ac.uk/child-health/research-projects/research-opportunities/turning-tide/turning-tide-harnessing-power-chi

12. Letter: The Royal College of Paediatrics and Child Health guidance for clinical research with children is currently in development. Correspondence is available from a key member of the College’s working party indicating that the research led by Young will influence the guidance.

13. Minutes of the teleconference listing details of the NIH and international FOR-DMD team members are available to corroborate this.

14. Letter: Corroborating correspondence from a senior member of the National Research Ethics service is available.

15. “Recruiting Children” Podcast for the 2012 International Clinical Trials Day hosted on the Cochrane Collaboration website http://www.cochrane.org/podcasts/issue/International%20Clinical%20Trials%20Day%202012/580