THE POWER OF PRIMARY CARE RESEARCH TO INNOVATE CARE

Text and photos by Prof Helen Smith

Think of research and images of technology-cluttered laboratory benches and white coated researchers in the hospital wards immediately come to mind. These are not unreasonable images to have as traditionally, most health-related researches have been conducted in the pathology-rich arena of hospitals. In contrast, relatively little research has been conducted in the primary care setting, and even less among those in the community who are unwell but do not seek professional healthcare.

Yet it is in primary healthcare where all minor illnesses can be treated, where most chronic illnesses (including hypertension, diabetes, asthma and depression) can be managed and where most preventative healthcare is delivered. In a strong primary care system, where all these come together, we see lower mortality rates and fewer premature deaths. So we have an anomaly: the healthcare setting where the majority of management and care can be provided hosts the least research.

Much of the information used to reach clinical management decisions in general practice is still derived from observations in the hospital setting, but such evidence is rarely generalisable and can lead to over-investigating and over-treating patients. Taking headache as an example, 70 per cent of the population experience a headache in one month, and 50 per cent of those who present to their family physician describe their pain as severe. If family doctors were to use hospital-derived evidence, most patients reporting severe pain would be sent for a scan to rule out intracranial disease. We all recognise that this would be completely inappropriate, but the scenario illustrates how evidence derived from studies of selected populations in secondary or tertiary care cannot be applied to the undifferentiated patient population we see in primary care. Family medicine (FM) needs its own evidence because the benefits and costs of diagnostic and therapeutic activities vary with the severity and prevalence of disease and with the patients' behaviour. Thus, decisions about effective management strategies in primary care must be derived from studying the patients who are cared for in this setting. We have a large armamentarium of research methods at our disposal and many of them are adaptations of classical research methods that have been modified to enable us to answer the research questions emerging from the consulting room in general practice. For example, the double-blind randomised controlled trial is the gold standard for assessing efficacy of antibiotics, but when we want to understand the optimal prescribing strategy for patients presenting with sore throat, the comparison is not between "active drug" and "placebo", but rather between immediate prescription of antibiotic, no antibiotic or the offer of prescription if the symptoms do not resolve spontaneously after three days. To generate this evidence, a three-armed open trial that is pragmatic and reflects behaviour in normal clinical practice is required.

Developing primary care's full potential

While the public healthcare sector undergoes restructuring into three regional clusters, the field of primary care and FM – both public and private – has a unique opportunity to influence healthcare delivery and policy. To harness the power of primary care, the Lee Kong Chian School of Medicine (LKCMedicine), together with the National Healthcare Group Polyclinics, has established the Centre for Primary Health Care Research and Innovation. This Centre will evaluate

Legend

1. Prof Smith with the students at the launch of the student special interest group in family medicine

2. LKCMedicine and NHG sign an MOU to launch the new Centre for Primary Health Care Research and Innovation at the Singapore Health & Biomedical Congress 2016

new technologies and innovative ways of delivering high-quality FM, especially to patients with chronic and multiple diseases. Recognising the important role of informal caregivers, and the impact caring can have on the carers' own health, the Centre will also focus its research in this area. Through research training and mentoring, the Centre will contribute to expanding the cadre of FM researchers for Singapore.

Alongside the Centre, LKCMedicine, with the support of the College of Family Physicians Singapore, plans to spearhead a Primary Care Research Network (PCRN) for family physicians and other primary care professionals with an interest in research. The Network will provide members with opportunities to enhance their research involvement through research advice and training, invitations to collaborate in multi-practice studies and opportunities to develop their own research ideas into funded studies. Initial outreach to private GPs has been positive, with many keen to support research projects that are relevant to their routine clinical duties and that can be undertaken without interrupting patient care.

There has been much experience in developing family practice or PCRNs in Europe, Australia and North America. I have previously set up three research networks in the UK, advised on network development in the Netherlands, Canada, Thailand and Australia, and established an international federation of networks.

The contribution to the evidence base that such networks have made is significant. For example, the study of safety and effectiveness of nurse consultation in out-of-hours primary care conducted by the Wessex PCRN informed the reorganisation of out-of-hours care for the National Health Service in the UK. PCRN research has informed prescribing strategies for common acute conditions including childhood otitis media, adult urinary tract infection and cough.

Summarising the totality of the impact of PCRNs is challenging in a short article, but their portfolio spans prevention and health promotion, disease management, palliative care and the organisation of services. In the early days of networks, there were some sceptics who wondered about the generalisability of research hosted by network-affiliated practices. But we have evidence to confirm that despite differences in practice characteristics, patients are representative of the general population. As well as generating evidence, networks can also support the development of research careers; in the UK, we have many examples of the transition of novice researchers to full professors in less than a decade.

Reflecting on over twenty years of involvement with PCRNs, the characteristics of the most successful research networks are strong ownership of the research questions by the participating practitioners, sufficient academic expertise and support, and mechanisms for reimbursement of the practitioners' time. It has been documented that networks develop their own momentum, often starting with simple descriptive studies and soon progressing to larger complex and collaborative projects as members grow in competence and confidence.

In addition, the underlying changes in demographics require us to develop a larger and stronger FM workforce for the future. To inform, enthuse and engage more LKCMedicine students about the opportunities and challenges of FM in the run up to the World Family Doctor Day 2017 celebrations, a special student interest group was launched. I enjoy supporting this group of students in their future careers in FM by helping them develop their ideas for research projects, career talks, lectures and community outreach activities.

Looking to the future

For the continued development of the discipline of FM, it is essential to evaluate the needs of patients and the effectiveness of primary care, and to develop evidence to guide our clinical practice. Primary care is a relatively young research discipline, and I hope that the initiatives I am developing with my colleagues will help swell the research activity and the evidence that underpins patient care in Singapore. ◆

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