

Can Pakistani health system afford the luxury of medical research?

The Government of Pakistan spends less than 1% of its GDP on health care (Budget 2001-2002).¹ The health care system in Pakistan comprises of public as well as private health care facilities. The two systems operate parallel to each other. In the private sector, there are some accredited outlets and hospitals, but also many unregulated hospitals, General Practitioners, Homeopaths, Hakeems, Jirrah, Faith/Spiritual Healers, Herbalists, Bonesetters and Quacks (Karim 1999).² Non Governmental Organizations (NGOs) contribute significantly to health and social sector. While an extensive network of Basic Health Units (BHUs) exists in rural areas of Pakistan, limited primary health care is provided in urban areas by the public sector. Most of the health care at primary level in urban Pakistan is therefore provided by General Practitioners working in private sector along with traditional healers. Quality of services provided by basic health facilities in rural areas varies a lot without a minimum mandatory standard. This along with lack of a referral system means many patients with minor problems might be presenting themselves in to secondary care health facilities in urban areas.

Common health problems in Pakistan can be easily tackled through better strategic planning and by focusing on public health interventions which are guided by research. The health status as evaluated in the National Health Survey (1990-91) and National Nutrition Survey (2001-02) of Pakistan, showed that nutritional deficiencies and infectious diseases continued to be the main reasons for mortality and morbidity, while the diseases associated with affluence, such as heart disease, and risk factors related to cancer were increasing (khalil et al, 2005).³

Talati and Pappas (2006)⁴ have stated that approximately 74,000 physicians were practicing in Pakistan in 2005. Annually, local medical schools and international medical graduate certification provide 5,400 physicians, soon to reach 6,800; while 1,150 physicians emigrate; and an estimated 570 physicians stop practicing for various reasons. The current ratio (0.473) of physicians to 1,000 populations is inadequate to maintain the nation's health. They estimated that the future Physician Workforce Shortages for Pakistan range between 57,900 and 451,102 physicians in 2020, depending on assumptions about future need. The total cost of providing the five years of medical education is US\$ 100,000, students are charged tuition of US\$ 833 at public colleges and US\$ 10,000-35,000 at private colleges.

So far majority of the research in Pakistani health system is mainly conducted by the faculty members of medical schools and higher educational institutions who have to publish few papers to get promotion to the next stage of their careers or the trainee doctors working on their dissertation to pass their Post Graduate exams. The College of Physicians and Surgeons (CPSP) requires FCPS supervisor to attend a workshop on Research Methodology, Biostatistics & Medical Writing (website www.cpsp.edu.pk accessed on 12.06.10). One can ask whether one workshop is sufficient in training future specialists in research. Research capacity of the health system is further limited by the number of supervisors, for example, neurology 16, neurosurgery 40, psychiatry 33, general medicine 308, general surgery 297, dermatology 28, gastroenterology 28, infectious diseases 1, nephrology 27, anatomy 2, biochemistry 1 and community medicine 19. This raises important questions about the incentives available for working doctors, who heavily rely on private practice for financial reasons to conduct meaningful research that is motivated by a desire to inform practice.

The missing link

Research in developed world has a unified agenda. It has the power to change things. It leads to change through its direct and indirect (through different government and non government bodies) impact on government policies. Thus most research causes improvement in circumstances of the people. In Pakistan this link does not exist. As a result research conducted in Pakistan by researchers based in Pakistan or outside has failed to make a significant impact. It is possible that this lack of influence has lead to frustration among health professionals and therefore most health professionals are mainly interested in getting the number of papers published in a journal, which will take them to the next stage of their career.

We should however point out that this is not the only reason for poor quality of research by health professionals in Pakistan. Another relevant point should be made here. It is not only the ability to conduct research that is important, ability to read research is equally if not more important, especially within the context of a developing country. This is what is required for the practice of evidence based medicine. Currently therefore the emphasis on reading research is essential in Pakistan.

Translation of foreign research into practice

There is yet another dimension to conduct of research in Pakistan. There is plenty of research in health sciences that

comes from the developed western world. Most research findings from these countries might be directly applicable to Pakistan and translatable in health practice, especially research from neighbouring India and Sri Lanka might be more directly applicable to Pakistan. Epidemiological research conducted across nations has suggested that the prevalence of different health problems might not be very different across the world. So, why do we need to reinvent the wheel?

Therefore, can Pakistani health system afford the luxury of research?

One can easily see the scarcity of both financial and human resources in health care sector in Pakistan.¹ We have also mentioned that health professionals are forced into running their private practices and that leaves little time for them to focus on research. This is true not only for senior professionals, but also for the junior doctors. Therefore the question we are faced with is, “can Pakistan afford to divert her resources both financial and human from delivery of health care to research?,” Wouldn't it be better to simply focus on providing health care to people instead of spending time and financial resources on research? We will now try to answer this question.

So, why research in Pakistan?

Research can offer both direct and indirect benefits. The direct benefits of research in Pakistan include; improvement in service delivery and service planning (for example what can be done to improve liaison between public and private sector or even primary care and secondary care, do we need nurses and doctors or should we create nursing assistants and assistant doctors to increase the number of health professionals, similarly, research can look into training issues related to both graduate and post graduate doctors). Another area which might benefit directly is the research into cost effectiveness. This includes not only cost effectiveness of treatments for the individual and the society, but also cost savings by making change in health system (for example, is it more cost effective to establish family medicine departments in hospitals in comparison with funding family physicians in primary care, can experienced nurses assist or even replace medical officers in outpatient clinics of a hospital who are mainly involved with referring patients to specialist services). And the last but not the least, research into non pharmacological interventions (for example research into changes related to stigma and behaviour related to long term illnesses) might directly benefit our health system.

Indirect benefits of research in Pakistan might include; improvement in service quality and satisfaction with the service, as well improvement in professional skills. Research into cost effectiveness and innovation in service development and modification might help Pakistan to use her meagre resources to better implement her health strategies. These benefits might lead to overall improvement in health of the nation.

The way forward

It follows from the above discussion that it is essential to conduct research in Pakistan; however, we need to revisit our priorities. This will essentially start with negotiating both the short term and long term goals of research in Pakistan, and agreeing on a research strategy which takes into consideration needs of all stakeholders. An obvious solution might be to establish a “think tank” at national level, which can setup the national research policy initially for 5 years. The think tank can consist of representatives from; The Department of Health, College of Physicians & Surgeons, Pakistan Medical Research Council and other relevant organizations, but most importantly consumer groups. Some of these agencies can then direct and promote research agenda through control over funding (for example, Department of Health) and through research for academic purposes (for example, College of Physicians & Surgeons Pakistan). These agencies can also negotiate with pharmaceutical industry over funding research rather than giving money to health professionals on expensive foreign trips. On the local level following steps can be considered to promote research (which can be implemented even if a national agenda is not agreed upon);

1. A local research advisory committee should be setup in each medical college. The committee should consist of middle grade doctors (Registrar and Assistant Professors), medical students, nurses and patients.
 - I. The committee can decide upon local research agenda for 5 years. The committee should decide this through an open debate involving members of the faculty and taking into consideration the local health needs and service deficits. The committee should then follow up the agenda every year and revise the research agenda every 5 years.
 - II. The aim of this exercise should be to prioritize funding.
 - III. The committee can also focus on setting up literature review and assessment of technologies to develop local guidelines based on existing literature.
 - IV. The committee can also exclude areas for research, for example where foreign knowledge is directly applicable (for example, medicines, surgical procedures and teaching practices) or research into rare causes, disorders and interventions for rare disorders.

2. Audit can be very important within the context of Pakistani health system. Establishing Audit Departments as well as allocating money to audit trials might be more fruitful than spending money on Research
3. The committee can also negotiate with the pharmaceutical companies on further funding for research and development

CONCLUSIONS

Given the current deficiencies of Pakistani health system, in terms of personnel, infrastructure and financial resources, Pakistan cannot afford the luxury of unfocused research. Research should have a clear agenda, which is achievable and has demonstrable benefits for the local patients. A lot of research from developed world as well as from neighbouring India and Sri Lanka can be easily translated into Pakistani health system. There are areas however, which will clearly benefit from research in Pakistan. This can be achieved only by deciding on both national and local level the focus of research and setting up short term as well as long term goals. The aim should be to reduce burden of health related morbidity and mortality as well as to reduce burden on health system through prioritizing of resources.

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