

“Think Research” in Everyday Clinical Practice: Fostering Research Culture in Health Care Settings

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“No development without research; No research without development”
Yvo Nuyens¹

The quest for knowledge has helped mankind evolve over the years, from discovery of fire through Dolly the sheep clone to Chandrayan moon mission, leaving behind a record of discoveries and inventions in science and technology. Each generation can begin the search for knowledge where the last one left off and contribute their share to the benefit of humanity, cutting across culture and boundaries.

Rigorous philosophical arguments substantiate that science and medicine are fundamentally different kinds of enterprises. But historians of medicine have demonstrated that in many instances both have progressed hand-in-hand, to produce medical knowledge that meet both the standards of disciplinary science and the immediate needs of medical practice.²

Medical sciences have made many advances in basic and clinical research that explore health risk factors and the burden of various diseases. Future molecular and genetic research will be instrumental in harnessing diseases in its earliest stage of inception in medicine.³

Research in literal meaning is gathering knowledge or investigating thoroughly. But the term scientific research is defined as an organized and systematic way of finding answers to questions.³ The pattern of medical education and research has evolved over the years, from textual knowledge and application to more of evidence-based learning. Medicine has been defined as the science and art of healing. Researchers were engaged in discoveries and clinicians managed clinical practice, each confined to their own fields.

Evidence-based Medicine (EBM) has revolutionized medical science, to bring about an amalgamation of professional scientists and clinical practitioners, with respect to knowledge and skills. EBM integrates the best external scientific evidence with individual clinical expertise and patients' choice.⁴ In the field of Bio medical research, Translational Medicine is currently gaining much significance with clinical trials bridging the Bench-to Bedside knowledge translation.

Translational Medicine is the process which leads from evidence based medicine to sustainable solutions for public health problems.

Academic institutions are the major centres that are continually and actively involved in medical research in many countries. Currently global health research recognizes only those individuals with high international profile, outstanding research and reputation for attracting funds. This has worsened the Publish or Perish attitude, which refers to the pressure to publish work constantly to further or sustain a career in academia. The many issues relating to the divide in science and the double burden that stifle research outputs from Less-Developed-Countries (LDCs) or developing countries have been critically reviewed and well debated by Samir et al.⁵

Multiple factors at the individual, organizational and policy level were found to influence research activity in health care settings. The individuals' skills, attitudes and professional expectations are motivating factors that facilitate a research climate. The major organizational challenges, which include culture, resources, environment and logistics, either facilitate or impede research and evaluation. The issues identified at the organizational level were the prevailing practice unit culture with major focus on service delivery, management values and priorities and research training for practice.⁶ At the policy level, factors like poor communication and dissemination, lack of technical capacity in policy processes and influence in the political context slow down or negate evidence-based policy-making and implementation.⁷

Presently research culture is lacking in majority of health care settings, mainly in less developed countries in comparison to a research-led teaching environment in developed countries. Research culture has been defined as a whole system where research is perceived more favorably and used more proactively by the majority of practitioners.⁵ The continuing emphasis on 'somebody has to take care of the patients', still makes research unpalatable to clinicians in academic and clinical practice settings. Unless adequate personnel and resources are made available both at practice and academic units, research will take a back seat to emergency and routine health care management.⁸

Given the facts and figures, the million dollar question is: *How do you initiate Research culture in clinical practice?*

The answer is: “Think research” in everyday clinical practice. This, by applying KISS principle (Keep it Simple and Stupid), is the most economically viable working solution to boost research culture from a clinical epidemiologist's point of view.

Physicians, nurses, researchers and academic faculty should be encouraged to undertake the everyday evidence-based clinical practice as clinical research. Research outputs from these collective

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efforts will depend on how well research methods and knowledge are integrated into clinical practice. These desired health outcomes, in the long run, can influence policy and potentially transform healthcare for future generations. Also development of collaborative links with academic partners should be negotiated and research projects complementing regional clinical practice issues need to be strengthened. With the global financial crisis evident in all research fronts, future thrust should be on performing effectively and efficiently with available resources and infrastructure.

The Global Forum in its commission report titled 'Health Research for Equity in Global Health' has stressed the significant role of Research Capacity Strengthening (RCS) for health research as "one of the most important activities in the correction of the 10/90 gap". This gap refers to the statistical finding that only 10% of worldwide expenditure on health research and development is devoted to the problems that primarily affect the poorest 90% of the world's population. All the three levels for capacity strengthening need to be highlighted: individual level (training), institutional level (development and strengthening of institutions) and macro or system level (enabling environment) for an equitable and sustained development.¹

In terms of healthcare, Oman is now one of the world's advanced nations. After 1970, major government investments have proved to be successful in improving health system performance in a relatively short period of time. Sultan Qaboos University (SQU) currently has many basic and clinical research projects that explore in depth risk factors, incidence, prevalence and mortality statistics of various diseases. There is commendable progress in the molecular and genetic research front also.⁹

Asya Al-Riyami has stressed the need for strategic proposals in Health research Capacity Strengthening (RCS) and Knowledge Brokering with more meaningful dialogue between policy-makers and researchers in Oman.⁷ The health care providers should undertake necessary *SWOT analysis* (Strengths/Weaknesses/Opportunities/Threats) to evaluate the existing research situation.

A positive research culture may be initiated at all the three levels of health care system by way of *Sensitization, Awareness and Motivation (SAM)* workshops. This may be followed by *Training of Trainers (ToT)* projects to build a *critical mass* or a cadre of trained mentors as future research leaders. Long-term plans to sustain research should call for negotiations with higher authorities and potential organizations like INCLEN to initiate CERTCs (Clinical Epidemiology Resource & Training Centres) in Oman.

The Arab scientific community need to create their own benchmarks for quality research which best suit their clinical practice, knowledge, skills and working environment. Improving

the quantity and quality of research in the institution can attract regional and international collaboration and monetary funding on its own. Peer review with *open access* should be allowed or made mandatory for medical publications similar to *open source codes*. This will enable all regional and international research works to be analyzed, audited, and vetted by hundreds, thousands or even millions of concerned practitioners as well as the global scientific community.

A change in the mindset can make a difference to research, the institution and to the society at large and encourage the *Publish and Prosper* attitude in scientific writing and medical publications.

Finally, *When do you attain a truly homogenous research culture?* To quote Professor Andrew Cheetham, University of Western Sydney:

¹"..When the research culture is effectively invisible, when research is nothing special... we will be discussing it over coffee...it will be simply part of what we do as academics as intellectuals. We will no longer discuss research; we will be too busy doing it..."

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