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THE NECESSITY OF EVIDENCE BASED MEDICINE IN HEALTH CARE SYSTEM - AN OVERVIEW OF THE PRESENT CRITICAL CONDITIONS

Physiology

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ABSTRACT

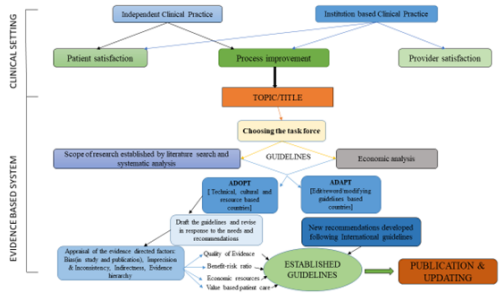

Figure 1: Merging Clinical Practice into Evidence based system

The practice of evidence based clinical practice involves assimilation of individual clinical practice and being able to analyze the best available evidence in decision- making concerning patient and family centered care. It is difficult for the health care practitioners to keep pace with the volume of upcoming medical literature. In consequence, most of the questions remain unanswered. To be at par with the information overload, clinicians mainly depend on expert-compiled clinical practice guidelines. The gold standard is to possess guidelines according to the needs of individual countries or regions depending on the demographic distribution of the country. But in cases where this method is not feasible it is the adoption of the International processes to meet the needs. This paper highlights this issue and encourages the fact that the clinical query expansion algorithm can close the existing gaps and aid in the development of effective evidence based clinical practice.

KEYWORDS

clinical practice, evidence based medicine, guidelines, health care, regulatory environment

BACK GROUND

Clinical education has raised questions of doubt about quality and relevance in research. In many a times lacking in research may affect the core of educational policies and practice. Complementation of research and practice is at the heart of “Instructional dynamics” in medical education. Whether the challenges in clinical settings will provide impediment in research can only be solved by special expertise. Powell in 1980 referred to education as a “fundamentally uncertain profession” where ingenuity and sense of art becomes more meaningful than professional knowledge. Again, professional knowledge only can lead to disciplined research and the solutions will help in educational problems as well as in other domains. The panorama of different aspects of research opens up communicative opportunities and quintessentially defines the professional education.

Unfortunately, many loose connections exist between research efforts and clinical practice, not the least of which is that preliminary studies far outnumber definitive ones, and all compete in the medical literature for the attention of readers. In terms of research capacity building research network is very effective. Hence research opens up more avenues for communication, so the remedies are easily found in complex cases as compared to clinical practice where there are complications at the cost of clarity due to more individualization. In one word, refinement of clinical practice is research. In the practice of the art of medicine the responsibility and knowledge comes from the depth of science research, which has its application in practical life. At this era of high cost medicine, clinical research can bridge the gap between the demands and the reach of the patients. Hence research should be placed at a higher seat as compared to clinical practice for the benefit of health care practice which is offered to the patient. Ironically, the biomedical and applied research enterprise represented by the wedge is vigorous, with an annual investment of over $ 55 billion (£34.4 billionn) worldwide, money which has to be tapped so that it is beneficial to the health care services which are undergoing cutbacks in spending. Clinicians and health care planners who want to improve the quality and efficiency of healthcare services will find help in research evidence. Study findings, on the contrary, can challenge the clinical practice. Low status is often assigned to education where the focus of dynamism is outside education, like racial identity, citizenship status or the history of rise in schools and Universities. Research that focuses on them do not essentially probe inside the educational process. Hence, it is a necessity that researchers turn their attention inwards and focus themselves to educational problems that propose solutions. This deeply probing sense of a researcher will edge over the design of interventions that will augment the effects of treatment and clinical practice (Haynes et al.,1998; Hait, 2005; Ball et al.,2007; Jones, 2000).

The judicious outcome of clinical research is clinical trials, integrated with clinical evidences it is best described as Evidence based Medicine, where decisions can be made about an individual patient in a cost effective manner and with an unbiased approach. It has been seen the clinical trials are "the gold standard" for setting an objective for treatment and then comparing it with existing representations in clinical settings. The approach favors towards a more reasoned approach to implement a wide variety of designed programs to prevent disease and promote health and education (Ives, 2006).

In an era of clinical trials which is facing regulatory provisions the preamble of balance between expensive treatments and regulated budget is a compelling force to health care policy makers to provide a link between evidence and critical appraisal of the scientific approaches needed for research which is an integral component of preventive health care. Under-reporting is the man limitation possibly induced y the vested interest of a disrupted perception in any form of clinical research. Spontaneous reporting precisely documented is a significant contribution to investigation, recognition and practical management of any intriguing problem in Healthcare(Samhsa.gov, 2011; Girard, 2007).

CASE DIARIES

A study in the mental health arena in United States:

The argument that has been put forward by Citizens Commission on Human Rights, United States in mandated health coverage concerning mental health care is the rising cost in patient care over lifetime. The limiting cost spent on inpatient care over a lifetime is $50, 000 in typical situations.

The data provided by Substance Abuse and Mental Health Services Administration (SAMHSA) under contract no 283-2007-0001 and by RTI International under contract no. 280-2003-00026 clearly shows that 40 percent of US adult population are in need of treatment, in conjunction with 23 percent of adolescent population. The treatment has been mainly disbursed through primary care, community health centers, emergency rooms, nursing homes, or correctional institutions(Sahmsa.gov, 2011).

National expenditures for the treatment of mental disorders amounted to $100 billion in 2003, the most recent available data of National estimates. In 1986, the mental health care cost was $33 billion and is

projected to reach $ 203 billion in 2014.

The current source of funding includes both public and private sectors. The mental health business has become a multi- million tug of war, with patients as the rope. A new breed of companies known as managed care agencies, or "gatekeepers" has gained control over health benefits and have directed patients to expensive outpatient clinics instead of more cost effective treatments.

In the late 1900's early 2000 it was a demand of the managed health care system in United States to eliminate Mental illnesses. Evidences have shown that a partial hospitalization program was sufficient to offer the same services that are provided at present through expensive hospitalization and encouragement of outpatient treatment. With the advent of 2000 and subsequent years should have been dedicated to Eradication of Mental illnesses, the turn of the table by the newest players in the game have led to a state where the solutions seem to be gross revisions of the health care agendas and revamping the services, through more regulations by the State or the Federal government on the managed care companies (Citizens Commission on Human Rights, 2021; Stat 7 U.S.C. Section 317I(a), 1982; Stat21U.S.C. section 101.9(91), 1985; Blue Cross Blue Shield Association, 1992).

A Study in Clinical Practice Utilizing Medical Devices in Europe

The European Union has been provided with a “New Approach” for assessing and accepting medical devices after addressing the commonplace safety concerns for protection of human health. The Treaty of Lisbon implemented in 2007 defined a new paradigm in communicating the public health safety concerns as far as medical devices are concerned in clinical practice (EUDAMED, 2007)(12).

There have been some examples of widespread clinical complications with some high-risk implantable medical devices and in-vitro diagnostic devices. A few examples of making a choice in the practical clinical field include a cardiologist using a bare metal stent as an implant or choosing a drug- eluting stent, a primary care physician in the rural setting preferably using one suture material over another depending on the easy availability and cost, or a health institution deciding about the technologies for colon cancer screening and choosing one over the other(WHO Background paper, 2010).

According to the opinion of the expert panels in primary medical fields the devices will be evaluated for their medical utility and specific guidance will be issued on which the regulators who will further scrutinize before evaluating the applications from the manufacturers.

Therefore, it becomes the responsibility of the health care providers to provide increased number of evidences about the performance and relative implications in clinical practice and outcomes. Similar evidence based reports are sought by the reimbursing agencies in regards to the cost effectiveness of a medical device prescribed to a subject for diagnostic or therapeutic purpose. The major aim is to build up the support system for generating clinical evidence in favor of a particular device before it gets approved for regular use in the medical field (Fraser, 2016).

Study in facilitating research based health care practice in India

A long standing involvement in the interface between clinical practice and research is the fundamental pillar in delivering quality health care to the patient. Successful application of evidence into clinical practice is designed to support projects from planning to evaluation. Collecting evidences, building up the context and then facilitating plays a vital role in transforming the health system for better(Gill and Kitson, 2015).

The examples of transition from knowledge to practice includes educational advocacy, academic opinions and supporting literature, tailored messaging in clinical practice, application of information technology in scientific data collection, and setting reminders (Grimshaw et al., 2012).

The scenario in India is a little different in the sense that the clinical guidelines which involves the standard treatment guidelines are developed at the national and state levels by a agencies approved by the task force as proposed by the Ministry of Health and Family Welfare (MoHFW).The guideline task force is supposed to be engaged in reviewing the existing guidelines, recommend new principles, update and provide new tools for providers, insurance commissions, and patients to project an integrated system of implementation. However, on careful investigation it was found that the recommendations suggested by the task force is a replica of international recommendations and has a low success rate in the Indian context. The most adaptable recommendation by the MoHFW task force follows the UK National Institute for Health and Care Excellence (NICE) through literature review and expert consensus(Standard treatment guidelines, 2017; Government of India Guidelines,2017; NHSRC,2021).

Hence it is mandatory to develop guidelines relevant to India with new set of evidences that is acceptable to the professional working group in India. The 2017 National Health Policy approved evidence based standard guidelines in the best interest of the country to be implemented both in public and private sectors. As India is forging ahead to 2025 with an aim of doubling the health expenditure, the clinical guidelines fitting into the needs of the country will dispense dependable navigation to pertinent evidence based ethical practice of medicine (Ministry of Health and Family Welfare, 2017).

CONCLUSION

Europe has proved its excellence once more in providing data leading to a well- organized structure of pharmacovigilance or drug monitoring as an answer to methodological limitations in a conceptual framework of clinical investigation.

Following the example of European community of Medical Health Professionals appropriate measures should be adopted by health care community professionals to operate a vigilance system to collect and assess information likely to impact the benefit : risk ratio of conventional treatment and managed care with a central agency to facilitate the exchange of information and allow competent authorities to share the information at the same time to reinforce patient safety.

In conclusion the art lies in the application of the discovery to the practice of medicine. It begins with the generation of a great idea followed by formulation into a testable hypothesis and then a combination of luck, skill and tenacity whereby a discovery will occur. The final synthesis phase requires the ability to identify the potential importance of a discovery to a clinical problem. This also includes to put forth the scientific basis of medicine and get it familiarized with the medical problems. Movement into application phase requires the ability and skill of the researchers again to determine the importance of discovery to mentors, models of human diseases, access to human tissues, funding and powerful tools for conducting research with human subjects and evaluating interventions thus awarding the success to the tenacious individual scientist and the effective team of clinicians. Trumping of all the barriers may be cast onto a regulatory environment to which the research is seasoned.

Declarations

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Conflict of interest
The author hereby declares no conflict of interest

Ethical guidelines
The article is based on previously conducted studies and does not contain any studies with human subjects or animals.

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