



Evidence-Based Health Care, Past Deeds at a Glance, Challenges and the Future Prospects in Iran

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Abstract

Background: Along with the global fervor over evidence based medicine (EBM), certain measures have been taken in Iran too. Many educational workshops and national and international seminars have been held. Multiple educational packages have been prepared and even included in the educational curriculum. In recent years, policies have been directed toward encouraging clinical guidelines, health technology assessment reports and policy briefs. Also, recently, the 'National Strategic Program in Evidence-Based Health Care in the Islamic Republic of Iran' has been defined by the Ministry of Health and Medical Education. In spite of all these efforts, studies that follow the uptake of evidence-based contents at the bedside show that EBM is not used in practice and at the bedside. The overall effect of the efforts mentioned is the knowledge promotion of the participants of the educational programs and or increasing their abilities in articles' critical appraisal; nothing has been added in the practice arena. It seems that, in Iran, EBM's current and future needs are to focus on its implementation, what is in other words called 'knowledge translation' or the application of scientific evidence.

Keywords: Implementation science, Knowledge translation, Evidence-based practice, Medicine

Introduction

The emergence of evidence-based medicine (EBM) from the philosophical origin perspective dates back to the 19 century or even earlier (1), albeit there stands some evidence, which reveals that the pioneer of EBM was Persian physician and philosopher, Avicenna (Abu Ali Sina) (2). By the way, the new perspective, regarding the case, of course, proposed in 1992 by Gordon H. Guyatt, who underlined that EBM is the conscientious, judicious use of current best evidence in making decisions about patient care (3).

The broader concepts and deeper look, in the following years, proposed some other concepts such as evidence-based practice (EBP), evidence-based health care (EBHC) and evidence-based public

health, which of their nature, not only covered clinical medicine realm but also other health care providers (4, 5). Additionally, fairly widespread and consummate attention turned to the credos and values of patients, their families, practitioners, and some other realms such as organizational resources and patient status. For instance, the epitome of the veracity of factors related to EBP, proposed not only patients' preferences and scientific evidence, but also some other issues such as the patient clinical state, the setting and circumstance, and health care resources which all overlap with the clinical experience (6). Along with global achievements in the realms of EBP and EBHC, quite a few Iranian health professionals engrossed

by those mentioned fields. This article provides a glimpse into what have been done in Iran, regarding the case; and after scrutinizing the standing challenges and problems in this area; we will discuss the EBHC perspective in Iran.

Past deeds at a glance

More than a decade has elapsed since the first educational courses of EBP held in Iran's health academia. Although there exists no general agreement about who proposed the concept for the first time, but what is obvious here is that most of the attempts, in the early years, done by Education Development Centers (EDCs) especially in the Shahid-Beheshti, Tehran (TUMS; at Endocrinology Research Institute) and former Iran university of medical sciences (7-9). The first center of EBM was founded in Tabriz University of Medical Sciences in 2005 (10). In 2006, another research center in Tehran University of Medical sciences received foundation approval, with the same name, by the council of the university (11). Moreover, in other fields of study such as dentistry, pharmacy, nursing, midwifery, public health, allied health, nutrition, etc., similar groups and committees set up throughout the country.

Over the past few years, tens of workshops, scientific and educational seminars, with related titles, held in the presence of prominent inside and outside university professors (10-13). Furthermore, different conferences held throughout the country and among them "The First International Conference of Evidence-Based Medicine in Developing Countries" is worth of mentioning here, which was organized and held by Tabriz University of Medical Sciences in 2010, the congress of "Evidence- Based Caring" and "Evidence- Based Health", respectively, in Mashhad and Jundish-pour Medical Sciences Universities in the same year (10, 14); and meanwhile, some contracts and treaties signed with international centers (10). Providing educational packages of multimedia EBM was another valuable attempt done by active groups in this realm (11, 15, 16). In addition, a myriad of books compiled and translated, and, of course, quite a few theses and articles wrote in this area (10, 11).

Stepping into the area of educational curriculum of medical science fields, also, has been placed on the agenda, albeit before such move, some fields offered by medical sciences universities, considering (17). In this regard, Urmia University of Medical Sciences hosted the first national workshop of teacher training in EBM (at two levels of elementary and advance) with the cooperation of the Secretariat of Ministry of Health and Medical Education Council (18). Another achievement in extending EBP, worth of mentioning here, is the Policy of providing knowledge productions such as Clinical Practice Guidelines (CPGs), Health Technology Assessments (HTA) reports, and Policy Briefs (19-24). For accomplishing such goal, fourth and fifth Social, Cultural and Economical Developmental Plans of the country, defined compiling CPGs with priority to the burden of diseases (20, 24). In addition, decision-making based on local evidence in "Healthcare Reform Plan" and also providing evidence-based guidelines in the "Long Term Plan of Health Sciences and Technology" placed on the agenda (21, 22).

Apart from the legislative process, some measures had been done in forming committees for providing guidelines, and even some groups could provide or localize CPGs (25). Also, with the aim of improving the quality of services and clinical efficiency, a plan titled "National Strategic Program in Evidence-Based Health Care in the Islamic Republic of Iran" delineated and defined, by the Ministry of Health and Medical Education, which of its nature, is a guarantee for an attempt to produce, reserve, distribute, utilize, share, and of course, process and assess the best evidence for providing effective and immune services in a systematic process and compatible with the beneficiaries' different needs (23). According to those involved in the preparation of the plan; the main purpose of the proposed evidence-based system is "fulfilling the clinical efficacy at the highest feasible level of *health care delivery systems* in the country" and its ultimate target is "upgrading health outcomes via accessing to the best health care by providers and patients". For accomplishing aforementioned goals, macro strategies consist largely of boosting skills (which of their nature

proportional to the national priorities) for producing knowledge, providing relevant structure and process pertinent to such knowledge; enhancing the skill of referring to evidence in health service providers, in order to make them able decide based on evidence, internalizing the culture of utilizing evidence for daily medical care and finally providing access to authentic journals and databases of evidence for all providers (23).

A glimpse into all previous *measures* reveals this fact that inexorable effort, over the past few years, done spontaneously, with having no sponsorship, but could provide the milieu of evidence-based negation in different parts of the country.

Despite the mentioned attempts, few studies carried out into the effectiveness of such measures. These studies showed that holding the educational EBM workshop on providing critical thinking in reviewing articles is effective (26-29). While findings of those researches done in determining the amount of awareness and the view point of university professors and students training in general, special and advance course, reveal lower awareness toward EBM (30-37). Regarding the case, in a study, Abhari et al. found that 41 percent of interns and 66 percent of students in special clinical courses have a positive viewpoint toward EBM, but considering the referenced books and also the viewpoints of experts in this realm, as the priorities and the sources of getting scientific information, can be thought provoking. This study revealed that Cochrane Library had been observed at the bottom of the choosing resources chart (35).

According to Mozafarpur et al., 70 percent of participants (who were physicians) believed in improving the strategies, in the case of using EBM. Among the participants only 41 percent mentioned EBM in their reports and the interesting point was that their familiarities with the concept of EBM were insignificant. Seventy four percent of participants, in the study, believed that the main obstacle in EBM was the dearth of educational courses in this realm (36). Yousef-Nouraei and colleagues also found that English journals, referenced books for the faculty members, personal experience, referenced books for students

training in special clinical courses and fellowships are introduced as the most effective and important resources in clinical practice. It is still worth of mentioning that like the previous group, the amount of this group's familiarity with EBM, was negligible (37).

Though the findings of aforementioned researches call for holding more educational courses and taking steps into the area of educational curriculum for university courses, with the aim of expanding the EBP; as mentioned before, roughly ten years have elapsed since the first introductory and advanced educational courses of EBM and EBP held in Iran and we can admit that the only activity done in this area with no cessation was holding these mentioned courses.

On the other side of the coin, of course, we see that the researchers of the medical field in the country, during the past few years, were so active in producing localized Evidence, but the amount of utilizing evidence and research results was literally negligible (38-40). In this way, with the aim of applying research results, establishing clinical knowledge management centers placed on the agenda (21, 22). And in research activities, which have been done by the Knowledge Utilization Research Center (KURC) at TUMS, delineated the obstacle and suggested solutions for better utilization of evidence (12, 41, 42).

Challenges

EBM initiated with a clinical question and after being formulated, takes the step into a tortuous way of critical reviewing of articles for finding a solution which corroborated by most of the evidence (4). Studies that have been done many years ago illustrated the fact that finding evidence required reviewing 19 articles or so by a clinician (1). Because of the increase of doing research and publishing the results on the other hand, and daily concerns, plus a high number of patients referred for treatment to the hospitals from the other hand, it is not palpable, at this time many articles studied by clinicians to guarantee EBP. Taking the view that studying and reviewing the articles, solely, lead to changing behavior would be a grave mistake (43). The fact given a lot of attention after-

ward was that EBP was more comprehensive and more pervasive than research utilization. It would, on the face of it, seem a solution consisted of defining focused clinical question, critical thinking, critical appraisal of researches and evidence and finally synthesizing decisions based on all evidence, expertise and patients' preferences are necessary but not adequate for the implementation of EBM (5, 6). Considering the stress, Grol put on the fact that "EBM should be complemented by evidence-based implementation" was the last word to optimistic expectation for changing the behavior of clinicians and subsequently clinical effectiveness (44). In this regard, it is a necessity to pay attention to this point that albeit the result elicited from research and scientific journals may be adequate for researchers and innovators, such sources cannot satisfy people from other groups. The first generation of knowledge, such as the primary studies like clinical trials, and the second generation of knowledge which is actually the synthesized one such as systematic reviews, can catch the eyes of researchers and innovators. The third generation of knowledge which is the tools and knowledge products provided with the aim of knowledge translation to other groups such as CPGs for clinicians, policy briefs for politicians and patient decision aids for patients (43, 45, 46). To sum it up, based on few studies in determining the effectiveness of EBP interventions, what have been done during the last decade, with the aim of progressing EBM in Iran of course, if we do say not ineffective at all, they had a negligible effect on fixing EBHC (30-37). Actually, it is beyond individual clinicians' capacity or other professions to manage or monitor scientific information (4, 43, 47). A decade of the inexorable attempts in EBP realm, along with other results, reveals the necessity of paying attention to utilize and transfer of health knowledge (12, 38-42, 48-60). In addition, it also underscores the necessity of using knowledge products pertinent to the needs of users and also providing health system based on evidence (61, 62).

Future prospects

What 'should' take place in the country can be foreseen as two mandates that can strengthen

EBHC in Iran. The first is the implementation of the "family physician and referral system" program. The family physician program is the most serious component of the health sector reform in Iran (63). In fact, it can be considered the third biggest change in Iran's health system after the development of the primary health care system (64) and also the integration of medical education in the executive sector (65). The program is oriented toward service delivery to the population under coverage and the grounds for payment are 'per-capita' in addition to quality assessment of the service provided (66). It sounds that the service providing points and insurance organizations will take note of preventive measures to reduce the load of referral and costs. In fact, the financial support and sustainability of these services depends on preventive medicine. Since the services delivered in this program are cheap people may receive unnecessary services. To prevent and control this matter, services need to be standardized and emphasis should be laid on observing these standards. Therefore, despite the lack of interest shown toward the development and use of the CPG in service delivery till now, we expect to see the development of such tools at the beginning, for at least the first level of service delivery. Keeping in mind the significance of preventive medicine, the next step would be to design and implement 'Public Health Guidance's (PHGs). In fact, PHGs are recommendations similar to CPGs that are designed for public health topics (67). We have not seen the development of any PHGs in Iran so far. It seems that the development and use of these guidelines will be emphasized through the family physician program and also to cut expenses. The second point is the financial burden that is being imposed on Iran's health and the costs that are imposed on the people. According to The evidence available from the 'National Health Account Study' conducted in 2007 the "out of pocket payment" is around 54% (68). The imposing of economic sanctions on Iran leaves Iran in a resistant economic status, which highlights health costs and those spent on new technologies, and perhaps the surfacing of HTA as well.

In any case, the gap between this logical future (CPGs development and HTA reports) requires the utilization of evidence into practice, in other words 'knowledge translation' or 'implementation science'. It needs the existing knowledge, which has evidence of impact, incorporated into practice in reality and changes providers' behavior.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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