

## GUEST EDITORIAL

# Towards person-centered healthcare *via realistic* evidence-based medicine - informing the debate historically

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## Introduction

Despite the many successes of evidence-based medicine (EBM), the movement is now facing a serious crisis. This contention was articulated in the *British Medical Journal* in 2014 by Trisha Greenhalgh, Jeremy Howick and Neal Maskrey, all of whom are outspoken advocates of the EBM movement [1]. Among the negative unintended consequences of EBM they mention are the abuse of the evidence-based brand (*sic*) by the pharmaceutical industry, the unmanageable number of clinical guidelines being published, marginal relevance to individual clinical practice, an over-emphasis on following algorithmic rules and the problematic use of EBM and practice guidelines for patients with multi-morbid and socially complex long term illness.

A 'feeling of crisis' seems to be rather widespread these days. Problems such as the 'failing' of EBM [2] and the 'waste' in medical research [3] have recently been addressed by prominent advocates of EBM and the Cochrane Collaboration alike (for the sake of convenience, we take EBM and the Cochrane Collaboration as ideologically 'one' in this Editorial). As spokesmen of the so-called 'Evidence Based Medicine Renaissance Group', Greenhalgh and colleagues argue for 'a return to the movement's founding principles', claiming that something has been lost that should be restored in order to save modern medicine and healthcare. Thus, they suggest that the true meaning of 'real EBM' is to be found in the past and not in the present.

As medical historians, we believe that a historical analysis of their paper is called for. By discussing how the concept of EBM has constantly changed over the past two decades, we will first try to shed light on the current feeling of crisis within the EBM movement. Second, we will argue that it is unhelpful to project 'real EBM' in a blissful past in an attempt to save its future. Our argument will be structured around four interrelated 'evolutions' within evidence-based medicine. Together, they suggest

that a return to 'real EBM' of the past is not the way out of the current EBM crisis [4].

## From reform movement to established order

EBM may be conceptualized as a reform movement. Its pioneers have been described as 'iconoclasts'; as critical people who challenged the established order of 'authority-based medicine'. Their anti-authoritarian outlook was manifest in the way medicine was taught at the medical school of McMaster University in Hamilton, Canada. David Sackett and his colleagues at the Department of Clinical Epidemiology and Biostatistics developed their own way of teaching, which they labeled as 'critical appraisal' of the medical literature. It was inherently skeptical of the authority of teachers and of classical medical textbooks. Evolving from their early work in critical appraisal, the essence of EBM was not so much critical appraisal as such, but rather the (self)-critical *mentality* on which it was based. It is striking to see how often EBM proponents used a religious idiom to describe their 'conversion'. Sackett has often been described as an 'apostle-like figure' and a 'prophet', who restlessly travelled around the world 'with great missionary zeal' in order to 'spread the gospel of evidence based medicine' [5].

Over the years, EBM has witnessed some profound changes. The movement is no longer a small community of anti-authoritarian, (self)-critical evangelists. It has grown considerably and become part of the established order of medicine and healthcare. History shows that oppositional movements which eventually come to power find it difficult to maintain their original ideals. Such movements become appropriated by all kinds of 'vested interests' and are assimilated into the new established order. Some pioneers of EBM find it difficult to accept that EBM has

now acquired mainstream acceptance, expressing concern about the dogmatism and lack of self-criticism of their epigones. Ross Uphur, who was trained at the medical school of McMaster University in Canada observes: ‘... it seems a new orthodoxy is emerging, as resistant to criticism and reflection as the “paradigm” it sought to replace’ [6]. Bearing in mind the negative unintended consequences signaled by Greenhalgh and colleagues, EBM may have paid a heavy price for its success.

## From evidence-based practitioners to evidence users

The gap between ‘pioneers’ and ‘epigones’ was deepened by a second evolution within EBM. Gordon Guyatt - who had coined the term ‘evidence based medicine’ - characterized this evolution as follows:

‘When I started, I thought we were going to turn people into evidence based practitioners, that they were really going to understand the methodology, that they were really going to critique the literature and apply the results to clinical practice. I no longer believe that. What I believe now is that there will be a minority of people who will be evidence based practitioners, and that the other folk will be evidence users (...) They are not actually expected to read and understand the articles and really be able to dissect the methodology’ [7].

The distinction Guyatt made between practitioners and users was resonant of an important shift which took place over the course of the 1990s: from critical appraisal to systematic reviews and clinical guidelines and from individual to collective empowerment. While ‘critical appraisal’ referred to a skill which could be acquired by individual clinicians, clinical guidelines represented tools to determine the proper diagnostic and therapeutic strategies in a much more generic way. With the guidelines, a new form of authority-based medicine had come into being. Henceforth, the majority of ‘evidence users’ submitted themselves to the authority of systematic reviews and guidelines, developed by an elite of ‘evidence based practitioners’. Again, a remark by Uphur is illuminating:

‘The vast majority of clinicians and trainees are not interested in EBM at all! What they want is to be told where to go and what to look for, and they want others to do this work for them ... Practitioners are to access trusted sources of pre-appraised, predigested, and for the most part, EBM-sponsored information. How this is empowering in any way is unclear. How this fosters independence of thought in medical controversies is even less clear’ [7].

So, in the present, we can understand and even sympathize with the observation made by Greenhalgh and colleagues that something has been lost which needs to be restored. Indeed, it appears that some of the original features of the EBM movement, such as anti-authoritarianism, a (self) critical mentality and a focus on independence of thought and individual empowerment,

have gradually been overshadowed by the proliferation of systematic reviews and clinical guidelines. However, as we will point out, it is impossible to return to ‘real EBM’ in order to save the future of medicine.

## From paradigm shift to moderate movement

When EBM was launched in 1992, it was presented as nothing less than ‘a new paradigm’ [8]. It was proclaimed that medicine was in need of a radical change. Henceforth, the focus should be on ‘hard evidence’, while intuition, pathophysiological reasoning and the use of unsystematic clinical experience were ‘de-emphasized’. The initial radicalism of the movement may have been inevitable: it is difficult to set things in motion by being overly nuanced.

However, in response to the criticism that EBM was too rigid, its program became more and more moderate and sophisticated over the course of time. Some critics argued that it represented ‘cookbook medicine’, used to justify budget cuts in healthcare. Sackett and colleagues argued that EBM had never been intended for use in that way, ‘because it requires a bottom up approach that integrates the best external evidence with individual clinical expertise and patients’ choice’ [9]. In 1996, the leaders of EBM re-defined EBM as ‘the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients’ [9]. In the years that followed, several initiatives were aimed at refining and improving EBM. Leading people from the Cochrane Collaboration committed themselves to improving the ‘evidence base’ of EBM. They highlighted ‘the scandal of poor medical research’ [10] and the ‘waste’ of a large part of the billions of dollars spent on biomedical research on a yearly basis [11]. Cochranites (as we describe them here) also started to pay attention to the difficulties surrounding the implementation of ‘evidence’ in clinical practice [12,13]. There was an increasing focus on the clinical *decision* to be taken - which did not always follow from the available evidence. Finally, there was an increasing interest in values, in particular patient values [14,15]. For all these reasons, some EBM advocates preferred to talk in terms of ‘evidence *informed* medicine’ a notable and most significant shift [16,17].

The recommendations made by Greenhalgh and colleagues within their article in the *British Medical Journal* nicely fit this trend of self-reflection, moderation and nuance. It is therefore ironic that they should call for a return to the past, because their image of the golden past of ‘real EBM’ is distorted. They argue for a return to the founding principles of the movement, which they define as ‘to individualise evidence and share decisions through meaningful conversations in the context of a humanistic and professional clinician-patient relationship’ [1]. This, however, does not even come close to the original program of EBM, which was doctor-centered [18], emphasizing hard statistical-epidemiological evidence.

## From specific to protean concept

In the early days of its inception, EBM stood for a radical program of the rationalization of medical practice, using hard evidence produced by clinical trials. Over the course of time, however, it has become increasingly difficult to pinpoint what is distinctive about EBM. Not only has its ideology been moderated, but its use and scope have been broadened as well. Over the years, the 'macro-dimension' of EBM has increasingly gained importance, especially after Muir Gray coined the concept of 'Evidence Based Health Care' [19]. EBM transcended the discipline of medicine and was embraced by very different stakeholders in the field of healthcare and beyond. Since medical professionals tend to prefer clinical guidelines very different to those of governments or insurance companies, this gave rise to very different understandings of EBM [20]. In 2005, medical historian George Weisz observed that it had become 'such a protean concept that anyone can appropriate it' [21]. The concept had become relatively meaningless and little more than 'a popular catchphrase' [21]. His colleague Martin Edwards even concluded that the combination of great rhetorical strength and elusive contents may lead to the exploitation of EBM [22].

Greenhalgh and colleagues confirm, in our view, that Edwards' warning was prophetic. They point out how the 'quality mark' of EBM is misappropriated by the industry, governments and health managers [1]. It is doubtful, however, that a return to 'real EBM' will prevent selective use (or even abuse) for political or commercial purposes. EBM has lost all specificity in the way Greenhalgh and colleagues define it. To them, 'real EBM' includes everything between shared decision-making and public health. Well meaning as their intentions may be, the concept of EBM has become rather meaningless and has therefore become even more vulnerable to misappropriation and in this there is danger.

## Conclusion

There is a general feeling that something has been lost in EBM. It seems that the spirit of anti-authoritarianism, (self) criticism, independence of thought and empowerment of individual physicians of the early days of EBM has disappeared. At the same time, however, the image of the 'golden age' of 'real EBM' is distorted, as it reflects contemporarily nuanced ideas, rather than the initial program of the movement. The erroneous notions about the past of EBM are problematic, because they imply that the negative unintended consequences are due to misinterpretations or even abuses of EBM. As a result, the limitations of EBM itself (besides its evident strengths) may be overlooked.

It is important to 'know your history', as a means of fostering awareness of the strengths and limitations of - in this case - EBM. Of course EBM has had many strengths. As Iain Chalmers stressed, EBM and the Cochrane Collaboration have been crucial for the abolition of all kinds of medical practices which were proven to be

ineffective or even harmful: one of the main functions of EBM and the Cochrane Collaboration has been *eliminating bad medicine* [23]. Although the importance of this can hardly be overestimated, it has little to do with *procuring good medicine*. For that we need *something else* – such as qualitative research, shared decision-making, clinical expertise and patient values and much more.

So why don't we forget about the idealized image of 'real EBM' and embrace *realistic* EBM instead? Is this the path to an authentic understanding of clinical medicine? The European Society for Person Centered Healthcare [24] is keen on doing just that. Having emerged in response to the current crisis in EBM and being informed by two decades of analysis of EBM in the *Journal of Evaluation in Clinical Practice* it aims to take all facets of the subjective experience of illness by patients into account without forgetting about science. It is to be hoped that the marriage between the medical humanist and the applied scientist does not lead to a new kind of unreflexive, orthodox offspring. Time as always, will tell.

## Conflicts of Interest

The authors declare no conflicts of interest.

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