Chapter 24
The Gap between What is Knowable and What We Do in Clinical Practice

Maartje H.J. Swennen
University Medical Centre Utrecht, The Netherlands

ABSTRACT

Evidence-based Medicine (EBM) is a tool that aims to bring science and medicine together by enabling doctors to integrate the latest best evidence with their clinical expertise and the individual patient's wishes and needs. However, EBM has both strong supporters and antagonists and is confronted with many barriers that impede uptake of the best evidence by doctors. To date, it remains poorly understood why doctors, do, and do not, incorporate high quality evidence into their routine practice. I will take you down the road of how I became more and more intrigued by all the challenges that EBM faces. In addition, I will explain to you how I hope to contribute to closing the gap between what is knowable using EBM methods and what we do.

INTRODUCTION

This chapter takes you through the rationale behind and my own reflections on why I became involved in research on the implementation of Evidence-based Medicine (EBM). For this, I have partly rewritten a joint paper on EBM into a first person narrative. The original paper is accepted for publication by the Journal of Evaluation in Clinical Practice (Swennen, Van der Heijden, Blijham, & Kalkman, in press). This chapter adds a more comprehensive description of what EBM aims at and why. In addition, it includes my thoughts and feelings at each step of my learning process.

I would not have been able to initiate or continue my research without the support of Dr. Geert van der Heijden, Professor Geert Blijham, Professor Yolanda van der Graaf and Professor Cor Kalkman; all having the University Medical Centre Utrecht (The Netherlands) as their (primary) affiliation. This means that in this chapter 'I' often will reflect 'we'.

First, I will provide you with some information about my background. I graduated from Medical

School at the Utrecht University (The Netherlands) in 2002 without ever having heard of EBM. (Nowadays, the curriculum of my Medical School comprises EBM). After Medical School I decided not to start my residency in Internal Medicine, because I felt I had to protect myself against the emotional burden of me wanting to become an oncologist. For me, being an oncologist would be all about providing the best care to patients, and pay even more attention to the ones that could not be cured. Hence, after much deliberation I chose to work for the Executive Board of the University Medical Centre Utrecht and became a non-practicing doctor. This allowed me to work on the crossroads of management and doctors, and inspired me to try to bring management and doctors together by solving misunderstandings that impeded collaboration. The Executive Board offered the opportunity to do an MSc on Healthcare Management, and so it happened that late 2003 I *first* heard about EBM during this MSc. I could not believe that until then I had been completely unfamiliar with EBM. During all my medical lectures and internships I never questioned to which extent the knowledge and skills I was taught were (or were not) evidence-based. I fully trusted the teachers, i.e. experienced doctors, to be right, just like my fellow students did. In other words, I was blind to whether the advice received from the teachers was authoritative (evidence-based) or merely authoritarian (opinion-based). So, for me, this was quite an eye-opener. Hence, I decided to do my Master Thesis on the implementation of EBM. This Master Thesis resulted in the joint publication and gradually evolved in my PhD-fellowship and an academic training in Clinical Epidemiology. My research and this chapter are about my aspiration to help doctors getting the evidence into practice.

So, I am a supporter of **E**BM, in that it concerns both **E**vidence and clinical **E**xpertise to be crucial: The evidence only becomes valuable when clinical expertise guides its proper use in clinical practice. Therefore, I think the name EBM

and some reporting (in science and teaching) are rather unfortunate, because of their focus on the evidence part. It is completely understandable that this still causes many medical students and doctors to conclude that EBM is decontextualized from real life clinical practice; or is all about certainty; or that clinical expertise is considered less important.

I believe that all doctors want the best for their patients, and therefore deserve further help to become better able to actually do so. In time I hope my PhD fellowship will render helpful solutions that will enable and inspire doctors to further improve patient care.

What Does Evidence-Based Medicine Imply for Medical Decision Making?

Doctors are expected to complement their clinical expertise with findings of research and to take into account the needs and wishes of individual patients. EBM aims to integrate the current best research evidence in a conscientious, explicit, and judicious manner with clinicians' expertise and patients' unique values and circumstances (see also following list) (Guyatt & Rennie, 2002; Straus, Richardson, Glasziou, & Haynes, 2005).

Explanation of key elements of the chosen definition for EBM:

- Best research evidence is considered to be valid and clinically relevant research.
- Clinical expertise refers to the ability to use clinical skills and past experience to rapidly identify each patient's unique health state and diagnosis, their individual risks and benefits of potential interventions, and their personal circumstances and expectations.
- Patient values comprise the unique preferences, concerns and expectations each patient brings to a clinical encounter and

Related Content

Extraction of Medical Pathways from Electronic Patient Records

Dario Antonelli, Elena Baralis, Giulia Bruno, Silvia Chiusano, Naeem A. Mahotoand Caterina Petrigni (2012). *Medical Applications of Intelligent Data Analysis: Research Advancements (pp. 273-289).*

www.irma-international.org/chapter/extraction-medical-pathways-electronic-patient/67264

The Role of Machine Learning and Artificial Intelligence in Clinical Decisions and the Herbal Formulations Against COVID-19

Anita Venaik, Rinki Kumari, Utkarsh Venaikand Anand Nayyar (2022). *International Journal of Reliable and Quality E-Healthcare (pp. 1-17).*

www.irma-international.org/article/the-role-of-machine-learning-and-artificial-intelligence-in-clinical-decisions-and-the-herbal-formulations-against-covid-19/298635

Bridging the Abridged: The Diffusion of Telemedicine in Europe and China

Xiaohong W. Gao, Martin Loomesand Richard Comley (2012). *Telemedicine and E-Health Services, Policies, and Applications: Advancements and Developments (pp. 451-495).*

www.irma-international.org/chapter/bridging-abridged-diffusion-telemedicine-europe/64998

RFID Applications in E-Healthcare

Mohamed K. Watfa, Manprabhjot Kaurand Rashida Firoz Daruwala (2013). *User-Driven Healthcare: Concepts, Methodologies, Tools, and Applications (pp. 259-287).*

www.irma-international.org/chapter/rfid-applications-healthcare/73840

Stomodeum to Proctodeum: Email Narratives on Clinical Problem Solving in Gastroenterology

Paramartha Bhattacharya, Amar Puri Asangaand Rakesh Biswas (2013). *User-Driven Healthcare: Concepts, Methodologies, Tools, and Applications (pp. 1073-1091).*

www.irma-international.org/chapter/stomodeum-proctodeum-email-narratives-clinical/73880