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Philippe Pinel (1745-1826): liberator of the insane
(Refer to pages 410-412)

Editorial

Evidence-based medicine and healthcare: advancing the practice

R B Haynes

In this issue of the Singapore Medical Journal, Pwee provides a masterful summary of the definition, modus operandi and challenges of Evidence-Based Medicine and Healthcare[1]. It is a pleasure to read such an erudite account and an honour to be invited to make a few comments for this new and timely series in the Singapore Medical Journal (SMJ). In doing so, I will touch on a number of issues he raises, bearing on the past, present and future of evidence-based practice.

In a medical journal, targeted at a physician audience, it is quite appropriate to use the term "evidence-based medicine". However, evidence-based clinical practice (EBCP) or evidence-based healthcare (EBHC) are the general terms that I prefer now, as these are inclusive of all who might contribute to the incorporation of evidence from research into the health care provided for patients and populations. For many health interventions, team work is needed for success, and doctors are only one of the many professions that can help. Also, very few interventions will work if patients or populations are unwilling or unable to become actively engaged in their application.

Further, policy makers and managers are essential to the provision and organisation of services so that evidence-based practices and procedures are available and accessible when needed. Thus, the term evidence-based medicine must be seen as just one part of a larger consortium involving the public, patients, practitioners, managers and policy-makers. From the perspective of readers of this journal, for most EBCP initiatives to work, we need to think of who we need to collaborate with if we are to succeed in delivering evidence-based care.

To state the obvious, the impetus for evidence-based care is new knowledge generated by the world-wide investment (of over US$100 billion annually) in biomedical and healthcare research. This level of investment has been sustained for decades now and is bearing fruit in increasing amounts, varieties, and potency that can, if applied, substantively improve the health of individuals and populations. The EBCP movement is simply attempting to find ways to harvest, grade and distribute this rich crop.

Unfortunately, consistent application of evidence from research remains a problem. Continuing education of health professionals remains primitive and largely ineffectual, health care decision making is not well studied or understood, health services change slowly to accommodate new services, patients and the public often do not follow recommendations whether or not they are evidence-based, and the cost of many new services and interventions often exceeds our capacity or willingness to pay. Here we have the elements of tragedy and irony: continuing investment in creating health care solutions, limited in

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potential for good by inadequate and under-funded means of implementation. The broader mission of evidence-based practice must include finding solutions to these problems.

Progress is being made! At the individual level, when EBCP began, practitioners had to become critical appraisal experts and vigorously engaged in this process for their own areas of clinical care. Nowadays, it is often sufficient for practitioners to have an appreciation of critical appraisal principles, but then rely on others to do the work for them in finding the best studies, and summarising and organising them for clinical use[2]. Thus, evidence-based "systems" such as Clinical Evidence, "synopses" such as those provided by ACP Journal Club and Evidence-Based Medicine, and "syntheses" such as Cochrane reviews[2], have taken much of the drudgery out of critical appraisal of individual studies by incorporating this into published products.

Thus, rather than each practitioner having to build her own evidence-based practice from scratch, all of the building blocks can now be acquired from reliable sources for most types of clinical practice and many types of health care problems. Many healthcare and clinical groups have taken this along additional steps by creating evidence-based practice groups around specific sets of practices for problems, easily-accessed through their websites (which readers can "google" with the search term "evidence-based" followed by their own discipline or problem, such as "evidence-based neurology", or find through the SCHARR compendium of evidence-based services, http://www.shef.ac.uk/scharr/ir/netting).

Further, evidence-based processing of research shows that the important new knowledge from research, that is of both relevance to an individual practitioner and clearly ready to implement, is finite and manageable. Even better, with modern information technology, the task of finding the right information at the right time and place is becoming easier, if not yet child's play. As Pwee notes, readers can look forward to learning the basic skills from the SMJ series on Evidence-Based Medicine and Healthcare[1].

Once the best evidence that suits a healthcare problem has been generated and reported, three important steps remain to successful application[3-6]. First, the evidence must be considered in the light of local resources, including expertise, facilities and capacity. This must be done at the local level, including clinical practice groups and ultimately individual practices, to determine which new evidence will be applied, who will apply it, and how it will be applied. This is why local and regional initiatives, such as that shown by the SMJ, are so very important.

Second, once important new evidence has been considered, organised and harnessed for local use, practitioners must be able to find quickly the evidence that is suited to the specific clinical problem that needs to be solved, and work with individual patients to determine which evidence is the best available, given the patient's circumstances. Then, the patient's wishes and likely actions need to be taken into account in reaching an evidence-based decision[2]. Finally, especially with the increasing numbers of self-administered treatments, patients will generally need on-going support to "stay the course" and follow the recommendation they have chosen, if they are to reap and continue to reap its benefits. These final steps of tailoring recommendations to patients and negotiating their acceptance have always been part of

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healthcare practice. Evidence-based practice is about ensuring that this process is informed by current best evidence.

Evidence from research has much to offer for the advancement of healthcare practice and for the improvement of health for patients and the public. Further, the supports for evidence-based practice are quickly improving through centralised critical appraisal, production of dependable and increasingly well-organised resources for evidence-based decision making, and spread of evidence-based principles and practice around the world. However, it is also obvious that more work needs to be done to achieve the full potential of evidence-based care.

One problem that is yielding to a world-wide effort is determining which evidence, that meets basic critical appraisal criteria, should be directed to which practitioner. Some readers may wish to contribute to this process, for example, through their own work with information systems and decision making, or by joining an international rating system for new evidence, such as the McMaster Online Rating of Evidence service (MORE; http://hiru.mcmaster.ca/MORE). MORE feeds into the McMaster PLUS service (http://hiru.mcmaster.ca/PLUS) which in turn will be made available for free through the BMJ publishing group this fall. If you are a practicing primary care physician, internist or specialist in internal medicine or one of its subspecialties, I hope you will help with MORE and benefit from PLUS.

The most important part of the history of evidence-based clinical practice and healthcare has yet to be written: the part where all the decision-making supports constructed and under construction fall into place so that practitioners provide, and people reliably receive, the best healthcare that evidence can justify. You can help write this history by familiarising yourself with the concepts through the SMJ series and joining in the process of local and international vetting (such as MORE) that is needed to connect sound new evidence from research with health care services and practice. SMJ

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