Users’ Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice
Eds Gordon Guyatt, Drummond Rennie
AMA Press, $82.95, pp 706, with CD Rom
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The evidence based medicine philosophy has become so embedded in the activities and motives of the healthcare enterprise that it is hard to believe that it has been only 20 years since the term evidence based medicine (EBM) was first coined. Credited with changing the way clinicians practise medicine, EBM has spawned a plethora of related activities such as evidence based guidelines, writing, nursing, dentistry, and social services.

The broad goal of EBM is to improve patient care by moving from an experience based form of clinical practice to one informed by the systematic application of medical knowledge. Initial horror at conventional clinical wisdom and authority being challenged has given way to the wide acceptance of scientific evaluation and application in patient care.

A more specific goal of EBM is to help doctors deal systematically with their information needs. But the EBM movement itself now risks overwhelming people with too many products. So how useful are these two books, which are based on the popular Journal of the American Medical Association (JAMA) series of “Users’ Guides to the Medical Literature”?

The JAMA series—25 articles published since 1993—has been enormously successful and influential, and has created an almost religious sense of fervour around the EBM movement. Gordon Guyatt and Drummond Rennie are the acknowledged masters of their craft, and their writing and clinical examples are clear and cogent.

They start with the assertion that the medical literature is the single most powerful resource in medicine, moving on to clearly explain the principles of EBM and guidelines for accessing and evaluating scientific articles. The first part of the manual, “The Basics,” includes an introduction to critical appraisal: evaluating a study’s validity, understanding its results, and applying it to the clinical care of patients. Clear explanations and clinical questions guide the reader. Part 2, “Beyond the Basics,” explains the teaching of EBM and expands upon corresponding sections in part 1.

Importantly, the authors discuss the more contemporary tendency in EBM to acknowledge the significance of patient values in the construction of medical knowledge and practice, as well as the various threats to the quality and integrity of the medical literature, such as commercial interests.

The manual offers not just a summary of the articles in JAMA, but modified and expanded material. Its companion volume containing the “essentials” may be better value for anyone wanting a quick and easy reference to keep beside the computer. The fuller version will appeal to textbook lovers.

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Appraisal for the Apprehensive: A Guide for Doctors
Ruth Chambers, Gill Wakley, Steve Field, Simon Ellis
Radcliffe Medical Press, £29.95, pp 209
ISBN 185775 982 6
Rating: ★★★★

As part of their preparation to become consultants, specialist registrars should explore what that role will demand beyond clinical practice. This can be one of the objectives of regular supervision. I recently discussed the appraisal process with my current supervisor. This was informative but also left me with several questions. A quick glance in the library to expand my knowledge proved unsuccessful until I found this book.

As the authors state, appraisal and revalidation are here to stay. The aim of this book, therefore, is not to explore the political arguments for and against appraisal or revalidation, but to gain a greater understanding of the processes in order to be able to approach appraisal in a positive and constructive way. Does it succeed? My answer is definitely yes. And one of the reasons is that the authors share not only a medical background but also an educationist one.

This book will enthuse everybody, whatever his or her learning style is. It will satisfy those who look for information, those who look for a model to copy, and those who look for ideas. It will also satisfy those who enjoy thinking about uncertainties, because there are many regarding appraisal, and the authors are sincere enough not to dismiss them.

The authors guide the reader from preparation for appraisal (itself an appraisable process) to results of appraisal. They present a “learning cycle” for appraisal and then run the cycle for the seven main headings set out in the General Medical Council guidance Good Medical Practice. The final chapter focuses on revalidation, aiming to design a logical plan for it through successful appraisals.

Recognising that many people see appraisal as a dry subject, the authors have sought to inject some humour by creating fictional characters to illustrate their examples. My favourite of these is Dr Hippie, a saxophone playing general practitioner.
Bioterrorism: Guidelines for Medical and Public Health Management
Eds Donald A Henderson, Thomas V Inglesby, Tara O’Toole

C urrent international tensions, the destruction of the World Trade Center, and the anthrax attacks on the United States postal system in 2001 make the spectre of biological warfare waged on civilian populations increasingly haunting. This book is an antidote to fatalism and provides up to date clinical, microbiological, and public health guidance on responding to possible bioterrorist attacks.

Almost half the book describes the 2001 anthrax attacks on the US postal system and the lessons learnt managing this event. Alert clinicians in many specialties, including emergency medicine, general medicine, primary care, infectious diseases, and paediatrics, provided the first phase of response by diagnosing anthrax and initiating microbiological investigation. Together they created a remarkably effective detection system for identifying and reporting cases with the support of quality local and reference microbiology. The healthcare system was also responsible for ongoing surveillance, patient and community support, and delivery of much chemoprophylaxis.

This experience indicates that effective biodefence preparedness must be built into the routine operation of health and microbiology services and that there must be harmonious working with public health agencies. The tendency for professional demarcations and specialisation will be particularly damaging for bioterrorism preparedness and must be strongly resisted.

The second half of the book contains detailed reviews of anthrax, smallpox, plague, botulinum toxin, tularaemia, and viral haemorrhagic fevers, which first appeared as separate articles in the Journal of the American Medical Association between 1998 and 2002 and which have been updated. Clear descriptions of characteristic presentations of these agents and good quality clinical photographs are supported by clear tables and excellent references. The final chapter addresses the dangers of large-scale quarantine, which, it is argued, would be damaging and ineffective.

Contributors to this book are impressive and include Dr D A Henderson, the former director of the global smallpox eradication programme at the World Health Organization.

Ghastly though its subject is, this book teaches us that inaction is not an option because timely chemoprophylaxis or vaccination of appropriate populations could successfully limit catastrophic casualties and socioeconomic collapse, even from efficient bioterrorist attacks. Indeed the capacity for effective response might even decrease the likelihood of such attacks.

The book will be of wide interest to all clinicians, the public, and politicians. It should strengthen clinical competence, public debate, clarity of policy, and support for clinicians, microbiologists, public health professionals, and emergency planners working to secure civilian biodefence.

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This Little Life

BBC 2, 19 February at 9 pm

The media has an insatiable appetite for tiny babies attached to tubing, wires, and monitors but it has never quite captured the emotional tensions between parents and between parents and staff.

Rosemary Kay’s television screenplay highlights the intense attachment that develops between a mother, Sadie (played by Kate Ashfield), and her 23 weeks’ gestation baby, Luke. Visual images of him at play and at the piano as a healthy child become the intense attachment to Luke, which has excluded his father, Richie, on the other hand, doesn’t want to let go and resents his wife for her attachment to Luke, which has excluded him. In the end Sadie helps him recover his self-esteem, intensive care is withdrawn, and poor Luke dies.

Moments in this screenplay capture the plight of parents and neonatal staff caring for extremely premature babies. The hurly burly of everyday life on a neonatal intensive care unit is well illustrated and punctuated by the parents’ experience of elation, anxiety, and depression according to their baby’s progress. Over time some parents develop a relationship with the intensive care monitors, an obsession with technology, and a desire to control treatment. On one occasion, when Luke is receiving 50% oxygen, Sadie suddenly grasps the oxygen control knob and turns it down, as she has heard that too much oxygen can damage the eyes.

Sadie’s concern that her baby is crying more than usual is initially dismissed by the staff. Then the consultant neonatologist examines Luke and finds nothing amiss. Some 48 hours later meningitis is diagnosed. The staff are blamed and are speechless as Sadie tears into them while they gather around the incubator. “How the fuck can a baby in intensive care get meningitis?” she asks. I have asked myself the same question many times.

The consultant neonatologist (played by Peter Mullan), a likeable and caring man, bears the brunt of the parents’ mixed emotions. I noticed a few cuddles with mum when things were going well—something that my consultant colleagues in the north west haven’t quite got into yet. On other occasions he has it really tough—for example, when talking to Richie who sits on a chair leaning forward with his arms tightly folded in front of him, aggression on his face, and his knees bobbing up and down like a tennis player ready to return every service with venom.

Overall this screenplay will go some way to increase public understanding of some of the tensions for parents and staff alike on a neonatal intensive care unit.

Malcolm Chiswick medical director, Manchester Royal Infirmary

Rating: ★★★★

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The body tells a story

There were two that morning. The first, a young Algerian man, a refugee from Kuwait. It was the eyes I first noticed: the eyes of the traumatised—dead, empty, yet somehow haunted, as if living a perpetual horror. Headache. Pitiless, there all day. His brow furrowed. He asked a question, and then came the story. The beatings to the head, savage, relentless. He was only 18 then. His brothers killed. His body thrown in a heap, like rubbish, among the corpses. For a flash moment, I was there—I could hear the screams, smell the sickening stench, feel the terror. And then back in the haven of my chair.

"And have you told anyone your story?" I asked. "No." "So . . . why now?" He shrugged his shoulders. "Parce que vous êtes là," he said simply. The revelation did not arise from speaking his (second) language; he had been in France for a while after his escape from Kuwait, and described it as a brutalising experience.

The second one came in—the same dead eyes. From Iraq. Backache. Again constant, relentless. When I examined him he winced at the slightest touch—all movement was painful. A poor fit with the biomedical model. I asked the same question: "And why do you think you have this?" And the same sickening story emerged: beatings, torture, loss, degradation.

They say that painful memories can become organised, structuralised: neuronal pathways fixing trauma into recurrent circuits of pain. My question released the story, gave meaning to the pain, and bypassed a number of useless investigations. And yet by itself, it was not enough. A number of medical students, during communication skills sessions, while seeking out "the hidden agenda," have complained in exasperation, "But I asked the question and nothing happened!" (Is communication really only a "skill," or is it something more intrinsic, a reflection of self?) Perhaps it is not simply asking the question, the revelatory trick, but the timing, the how. Perhaps that is the art.

The reply was also revelatory. "Because you are there," he said. Being there, a simple state, yet so hard to sustain. The silence of empathy drowned by all the noise in our heads, the competing agendas. General practitioners work constantly at the messy hinterland of body and mind—we know that both have to be attended to, validated. Our gaze is not the one described by the French philosopher Michel Foucault, the gaze of Medusa—petrifying, turning the patient into stone, and suffering into several hard pieces of biomedical explanation—always incomplete. No, our gaze dances between two worlds, the inner and the outer, the self and the other, the biomedical and the existential.

I could hear the screams, smell the sickening stench, feel the terror...
Don’t drink the water ...

It was about 4 am when the phone rang. I answered it with the usual worries about why someone should be calling me at this time. To my relief it was not a relative informing me of a family illness, but a friend letting me know of a possible threat to my own health. “We’ve been told that the hospital has been admitting lots of people with vomiting and the rumours is that terrorists have put arsenic in the water supply.” It was raining outside so I put a bucket out to collect some of the run off from the roof, and went back to bed.

I was nonchalant not because I mistrusted the story—although I did have doubts about its credibility—but because of the effect of living in Kathmandu under the daily threat of terrorist activity. The Maoist Insurgency in Nepal had started in the mid-1990s and had gradually grown in intensity and extent. A deliberate release into a major water supply would have been a change in tactic and would have shown a higher level of sophistication than previously, but it would not have been beyond the realms of possibility.

A phone call at a similar hour about a month earlier had informed me of the massacre of most of the Nepali royal family. Days of uncertainty and rumour followed, fuelled by an attempted cover up by official news sources. No one quite believed the initial evidence of contamination in samples from Kathmandu. I probably would have enough water from his ground storey of our flat, assured us that we would have enough water from his ground well to survive for months. However, I suspected that he was exaggerating, especially when his relatives started turning up suspected that he was exaggerating, especially when his relatives started turning up with large buckets.

By the evening of the same day I had been reassured that the threat was not credible. It turned out that only a few patients had turned up at hospital with vomiting, and this was probably related to a common food source. A colleague who tests ground water in Bangladesh for arsenic (where chronic exposure is a real threat to health) found no evidence of contamination in samples from Kathmandu. I doubted that the Maoist terrorists could obtain sufficient arsenic to overcome the considerable dilutional effect of the large reservoir. It was also hard to see how they could have dumped this quantity of material in the reservoir without the guards being alerted (and I knew the site was guarded).

The particulate matter in the rain water that ran off the roof clogged up my water filter, but otherwise this scare caused no damage. The Maoists continued planting small bombs in the city and rumours circulated about what else the terrorists were capable of doing. I am now back in the United Kingdom and training in public health. My involvement in health protection work means that I may be getting another phone call about a deliberate release of a biological, chemical, or radiological substance into the water supply. Should I be unlucky enough to receive such a phone call, going back to bed will not be an option this time.

Our response to terrorism is inconsistent.

I am under no illusion that I would be anything other than a small cog in a big machine. Other agencies (the water company and the police to name the two most important) will rightly take a lead in the early stages.

Public health involvement is likely to be to protect the public from the health consequences of the harmful agent or, perhaps more likely, the effects of an interrupted water supply.

Communication with the public will be key. Water is so essential to life that panic can quickly ensue if its supply is suddenly withdrawn. The water companies have contingency plans in place to cover most eventualities and the police have considerable experience from the terrorist threat from the IRA. I am reasonably assured that any new terrorist activity will be well handled.

What I am less sure of is that we are doing the right thing in response to terrorism globally. Many developing nations, like Nepal, live under constant threat of terrorist activity. Often such activity is born from grinding poverty. Mostly it is directed at national governments but occasionally it spills out and affects the international community.

Our response to terrorism is inconsistent. When it affects us no expense is spared. When it affects others in distant countries we are sometimes less quick to respond. Relatively little (compared with the costs of war) is invested in dealing with the root causes of discontent such as poverty, disease, and political disaffection.

If we do experience a terrorist threat to our water supply, remember that we are well positioned to deal with it. Remember also that most developing nations will lack this capacity.

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SOUNDS

War and causality

The kids are cross. They marched four miles and sat in the park on a freezing cold day listening to speeches they didn’t understand, but Tony Blair didn’t change his mind.

I tried to explain that the purpose of the peace march wasn’t to cause a change of heart in the prime minister, but to register a protest and show comradeship with others who felt the same. In that case, said the kids, there was no point marching in the first place.

Occasionally in medicine we can say with confidence that a particular agent, event, or lifestyle choice has caused a particular condition. More often, the putative cause turns out, with the clarity of hindsight, to be the least significant of half a dozen influences—or merely a confounding variable. Acid and alcohols. Lead and underperformance. The pill and promiscuity. The fashion industry and anorexia nervosa.

Similarly with treatments. As an evidence based clinician I am impressed with an intervention that has a number needed to treat of two, but half the patients so treated will return to demand their money back. “I came with problem X, you gave me medicine [or operation] Y, and I’m not cured.”

One of science’s most pressing questions is how, having sold the public a clockwork universe for 600 years, to convey the fact that complex problems have multiple causes and no simple or predictable solutions. There is always uncertainty; there is always the need for the calculated guesswork we call judgment.

Whose acts, and whose omissions, have caused the high rates of childhood malnutrition in Iraq?

Where is the chain of events that caused a particular teenager to choose a short, vainglorious career in terrorism?

What combination of diplomacy and threat will cause a dictator to dismantle the weapons whose components we sold him?

At what point can lack of cooperation legitimately be said to have caused a final call to arms?

Even my children know that these are non-questions. There are no causes in war, nor are there testable hypotheses, confident forecasts, or reliable ways of resolving paradoxes. Let us brace ourselves for the sequence of consequences that none of us will have predicted.

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The Users' Guides to the Medical Literature is a series of articles originally published in the Journal of the American Medical Association, later rewritten and compiled in a textbook, now in its third edition. The guides provide practical, clinician-friendly advice on all aspects of evidence-based medicine. During the late 1970s a group of clinical epidemiologists at McMaster University including Dr. David Sackett prepared a series of articles to assist clinicians interpreting clinical research. The evidence-based medicine philosophy has become so embedded in the activities and motives of the healthcare enterprise that it is hard to believe that it has been only 20 years since the term evidence-based medicine (EBM) was first coined. Credited with changing the way clinicians practise medicine, EBM has...