

Reviews of Books

Implementing Problem-based Medical Education

Lessons from Successful Innovations. Edited by A. Kaufman, University of New Mexico School of Medicine. New York: Springer Publishing Co. 1985. Pp 263. \$35.95.

A CHILD can be taught multiplication in two separate ways—by rote learning of all useful combinations (as in "tables") or by instruction in basic rules that enable him or her to cope with previously unencountered problems. Education this century has swung from the former method to the latter, primarily under the influence of Piaget and of cognitive psychology. Teachers now also realise that learning self-motivated through discovery, rather than externally motivated by carrot or stick, is more effective, retained longer, and more enjoyable.

Such thought came late to medical education, priding itself on the retention of vast quantities of facts, often to no demonstrable current or future purpose. So great is this mass of facts that for those eager to imbibe ideas it is "like trying to drink water from a fire hose"—more likely to knock one flat than to refresh and invigorate. During the 1970s a group of medical schools, particularly influenced by McMaster, introduced innovative curricula centred on "problem-based medical education"; students would be helped to discover ideas rather than simply being presented with facts, thereby retaining ideas longer, being more self-critical, and retaining a spirit of questioning inquiry far into their medical careers. This book is a detailed case-study of the introduction of an innovative preclinical course alongside an otherwise traditional curriculum.

It is not a how-to-do-it book (*The Joy of Problem-based Learning*) but rather a why-and-how-we-did-it and was-it-worth-it? book. Each aspect of the course is carefully evaluated (tutorials; library use; clinical skill teaching; clinical electives; community work; assessment; and admissions), and most chapters describe "what we have learnt", "experience of other schools", and "implications". Not all the stories are initially of success but overall the course stands up well to assessment. In particular, students exposed to the innovative curriculum did well on subsequent clinical courses and in National Board examinations. Furthermore they were less stressed, less cynical, and more community-oriented; and teachers also enjoyed it more. As one preceptor put it, in comparing innovative students with the "bovine approach . . . dulled by overwork" of the conventional students, "I find the same aura of joy and pleasure in medicine that we all *originally believed* would be part of doctoring" (my emphasis). Indeed, comments rather than serried ranks of statistics principally make the case for problem-oriented teaching, although one crucial statistical section shows that an innovative course is no more expensive in manpower than a conventional course, since staff spend less time in preparation and more in actual student contact.

Not all questions are satisfactorily answered. How much is success due to the Hawthorne effect of innovation, or to the self-selection of students (who were older, more mature, better motivated, and more imaginative)? Particularly important is that the average age of freshmen was 25.2, older even than the majority of "mature" students in British schools.

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In summary, the book is a single case-report which any medical educator contemplating radical educational surgery should read carefully, thereby avoiding well-recognised side-effects and complications, and instilling hope of eventual possible cure of a serious degenerative process afflicting many students.

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The Posterior Pituitary

Hormone Secretion in Health and Disease. Edited by Peter H. Baylis, Royal Victoria Infirmary and University of Newcastle upon Tyne, and Paul L. Padfield, Western General Hospital and University of Edinburgh. New York: Marcel Dekker. 1985. Pp 395. \$75 (USA and Canada); \$90 (all other countries).

THE sixth in the series on "Basic and Clinical Endocrinology", this book maintains the high standard of its predecessors, both in content and presentation. The intention of preparing a monograph which would be of value to both neurophysiologists and endocrinologists has been achieved. The contributors from Britain, America, and Germany are all experts and have produced papers of high quality. There is a lucid history of the physiology of the posterior pituitary gland, together with clear accounts of the neuroendocrine and physiological control of vasopressin secretion, hormone synthesis, the structure of the vasopressin and oxytocin genes, and the action of vasopressin on the kidney.

The book is divided into two sections, the first devoted to the physiology of the gland and the second to the role of the posterior pituitary hormones in disease. Since the two subjects are so closely interrelated this makes for repetition, with cross-reference between the sections, but this is not obtrusive. For the clinician there are excellent chapters on polyuria and disorders of thirst, drug-induced states of impaired water excretion, the syndrome of inappropriate antidiuresis, and a thought-provoking paper on the effect of vasopressin on cerebral function. One minor criticism is that the emphasis is so heavily on vasopressin; indeed, the detailed discussion of the role of oxytocin in health and disease is confined to the last chapter of the book. Thus there is one contribution solely concerned with the measurement of vasopressin in body fluids but little or no mention of the corresponding work on oxytocin.

This book is essential reading for neurophysiologists, neurosurgeons, renal physicians, and those with a special interest in endocrinology. Unfortunately its price will deter all but the most dedicated from buying it for casual reading. Those who do acquire it will find it readable, informative, and a lasting source of reference.

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The Prostate

Butterworth's International Medical Reviews: Urology, vol 3. Edited by J. P. Blandy, University of London, and B. Lytton, Yale University School of Medicine. London: Butterworths. 1986. Pp 225. £40.

FOR their *International Medical Reviews* Butterworths have selected pairs of editors, one from each side of the Atlantic, and contributors have been drawn about equally from Britain and North America. This latest in the series largely succeeds in presenting an up-to-date account of the knowledge necessary for the diagnosis and management of prostatic disorders. However, dual control must have added to the editors' task, for the book is unsatisfactory in one important part and several minor respects.

The two editors join forces in writing the first chapter, What is the Prostate and What is it For? This is a lively glance at comparative anatomy, and whilst neither question is fully answered, the reader is content. Expectations for a good read are further enhanced by the second chapter on the history and current problems of benign prostatic obstruction, where many pertinent comments are made including a warning that, if the developed countries of the West can barely afford sophisticated screening techniques or instrumentation, how much more inappropriate these would be for the Third World which suffers the same incidence of prostatic