

PRIMEPRACTICE CARDIOLOGY: A CD-ROM QUARTERLY FOR PRIMARY CARE PHYSICIANS

(Vol. 1, No. 1.) CD-ROM with manual, 7pp. System needed: IBM PC or compatible with DOS 5.0 or higher and 8 MB RAM, with at least 5 MB hard-disk space and a single-speed CD-ROM drive. Osseo, Minn., IVI, 1994. \$495 (single user).

PrimePractice Cardiology is the first issue of a quarterly medical journal on CD-ROM that has been developed by Mayo Clinic physicians as a continuing-medical-education (CME) tool for primary care physicians. Subsequent issues will focus on other subspecialties of internal medicine. For each issue physicians can receive a maximum of 10 CME credits (40 credits annually) from the American Academy of Family Physicians or the American Medical Association.

The current issue contains a comprehensive overview of a variety of mainstream topics and recent major developments in cardiology, all of which have been very well selected to match the interests of primary care physicians. The journal contains four sections: "Hot Topics" covers four major categories of cardiology (ischemic heart disease, dilated cardiomyopathy, cardiac arrhythmias, and sudden cardiac death), "Case Studies" includes four interactive case studies, "Library" is a comprehensive overview of the literature (adapted from *Mayo Internal Medicine Board Review 1994-95*, edited by U.B.S. Prakash. Boston: Little, Brown, 1994), and "Etc." includes an audio interview with the journal's editor, who answers patient-oriented questions.

The CD-ROM multimedia format offers substantial advantages over the format of a conventional medical journal by allowing the user to view illustrations, animated sequences, and video-loops, which are interspersed with the text and case studies. More important, this format offers interactive sessions, on-line help and search facilities, and simulated testing sessions that can easily be tailored to one's current needs and interests. We encountered two minor drawbacks: image retrieval from the CD-ROM is rather slow on a 486 processor, whatever the RAM size, and the physical-examination portions of the case studies seem too detailed.

In conclusion, this CD-ROM journal is of value for general practitioners and for interns and residents in internal medicine. The excellent selection of topics and the informal atmosphere created by the software result in enjoyable and informative sessions. We would also like single volumes of the journal made available.

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PHYSICIANS' DESK REFERENCE (PDR) LIBRARY ON CD-ROM

CD-ROM with installation diskette (3.5") and manual. Montvale, N.J., Medical Economics Data, 1994. System needed: IBM PC or compatible, with DOS 3.1 or higher and at least 640 kilobytes of RAM. PDR library \$595 (single user); PDR library plus *Merck Manual* \$895 (single user).

In addition to the well-known 2600-page, single volume of the *Physicians' Desk Reference* (PDR), the PDR library includes three lesser-known books: *PDR for Nonprescription Drugs*, *PDR for Ophthalmology*, and the *PDR Guide to Drug Interactions, Side Effects and Indications*. All four books have been integrated on

a single CD-ROM, resulting in a powerful and comprehensive drug data base.

The search capabilities of the CD-ROM are evidently much better than those of the book version. Besides the information one can get from drug handbooks, PDR on CD-ROM provides the clinician with the possibility of conducting a search according to side effects, therapeutic categories (indications), interactions, manufacturers, or words. For example, one can request all medications that are related to the Stevens-Johnson syndrome, those contraindicated in porphyria, or that interact with the combined treatment of warfarin, verapamil, digoxin, and prednisone. This information can be retrieved in seconds, whereas a manual search would probably take hours.

A useful feature of PDR on CD-ROM is the ability to check the possible interactions of an additional drug being considered for a patient who is already receiving multiple drugs. For example, a patient receiving nine different medications needs the addition of theophylline for asthma of new onset. The CD-ROM gives notice of a number of drug interactions and on request provides further details. It gives cross-references for each medicine on the list against all others, revealing many interactions hidden from the clinician. Information on two products can be displayed on a split screen for line-by-line comparison.

Another advantage of the CD-ROM is the quick and convenient answers it provides to specific and common questions. For example, it can show the recommended dosage and administration of a particular drug, especially when the drug is being considered in a problematic setting, such as renal insufficiency or liver disease. PDR on CD-ROM can also produce a well-organized, printed report that includes all the available information on a drug. Such a printout is useful both as a teaching aid and to refresh one's memory before prescribing uncommon drugs. Two minor sections that appear in the book version of the PDR have been omitted from the CD-ROM: one is the product-identification section, which contains photographs of medications, and the other is the section providing information on ophthalmic lenses and instrumentation, which can be found in the *PDR for Ophthalmology*.

It is possible to purchase a CD-ROM that includes, in addition to the four-volume PDR library, the full text of the *Merck Manual* of diagnosis and therapy (16th edition, 1992). In this configuration the opening menu allows the user to choose one of the options. The entire 2800-page *Merck Manual* can be searched either by table of contents (by viewing the list of chapters) or by index (by searching for key words). When we searched for "psoriasis" in the CD-ROM version of *Merck*, we found 31 entries, as opposed to only 3 listed in the index of the book version of the *Merck Manual*, 16th edition. Another advantage of the CD-ROM version is that multiple entries are shown simultaneously and can be easily compared.

The PDR library on CD-ROM is an indispensable tool for a busy practitioner, department, or research group, although the expense involved probably rules out its purchase by many individual physicians. The single substantial drawback we found in the package is the highly restrictive DOS interface. We look forward to the release of a Windows version, with its graphic and interface advantages.

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