The Reimbursement Manual for Office Procedures. Thomas J. Zuber and John L. Pfenninger. The National Procedures Institute, a subsidiary of The National Procedures Center, Inc, Midland, Michigan, 1994, 45 pp, $53.95 plus $6.50 shipping and handling.

The Reimbursement Manual for Office Procedures presents a timely and much needed tool for the primary care physician. The fast-approaching new era of medicine necessitates that the family physician be able to diagnose and treat a wider variety of disorders. In addition, whether a private practice physician, department head, or staff physician, the practitioner who also demonstrates good business sense is more likely to survive the budget crunch we all face. All of us are being asked to provide not only quality care, but care that is also revenue-positive. Third-party payers make this task more difficult, but the well-prepared physician can still easily accomplish both goals. Herein lies the true value of this manual.

The Reimbursement Manual for Office Procedures is a tabulated compilation of the cognitive and procedural CPT codes, along with ICD-9 diagnoses, most commonly used by the family practitioner. Each of the 17 sections consists of a table, which includes the relative value units, estimated national 50th percentile fees, and government- and third-party payer (in Michigan) reimbursements for each code. Information is included concerning the appropriate use of each code, such as which ones can be used simultaneously and which codes include "global fee surgical time periods," along with suggestions for ICD-9 diagnoses that support each procedural code. The introduction provides an efficient and easily understandable summary of "the rules" of CPT coding, such as the appropriate use of modifiers and combining CPT codes. This section also includes a list of procedures that, when performed in the physician's office, qualify for additional reimbursement for supplies. The manual is a well-written, quick and easy reference that is well suited to busy practitioners who need to know which code to use or how much to charge.

The manual serves three very important purposes. First, it provides family physicians with a list of procedures being performed by many of their colleagues nationwide, which may warrant being incorporated into their practices. Second, it allows all practitioners the ability to code more appropriately and completely all of their current services for which they may not have been receiving complete reimbursement. Third, it supplies the practitioner with the information necessary to respond to third-party complaints of overcharging. Armed with the information contained in this manual, physicians can respond intelligently, knowing the national average charge for each procedure. Every primary care physician would likely benefit in some way from using this manual.

Information contained in *The Reimbursement Manual for Office Procedures* is current in 1994. A supplementary update will be provided in 1995, so that the current edition may be purchased now and updated material added as it becomes available.

Drs Zuber and Pfenninger are leaders in the field of procedural medicine. This manual represents an accumulation of their knowledge on how to correctly charge and code for all of the procedures they perform, including all related items. In my experience, there is no other manual that compares with this one in the efficient delivery of comprehensive, clear, concise, and essential information for primary care physicians in practice today.

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Freedom from Chronic Pain. Norman J. Marcus and Jean S. Arbeiter. Simon & Schuster, New York, NY, 1994, 236 pp, $20.00. ISBN 0-671-79892-8.

Norman J. Marcus, MD, Medical Director of the New York Pain Treatment Program at Lenox Hill Hospital, presents a pain management program for sufferers of chronic pain based primarily on psychological techniques. The book is written in lay language with very little medical terminology and is relatively concise, considering the breadth of subject matter discussed. It can be easily read in a few hours and contains numerous charts, illustrations, and self-examination exercises.

Dr Marcus begins with three vignettes of chronic pain sufferers with whom both patients and physicians are sure to identify. Readers are assured that the "miracle" these patients experienced can be theirs as well by following the program outlined in the book.

Next Dr Marcus declares the "truth" about chronic pain. He educates readers concerning the difference in acute and chronic pain processes, based primarily on the research of Patrick Wall and Ronald Melzack. Readers are taught to identify the "seven D's" of chronic pain (doctor shopping, dollars, drugs, doubt, disuse, depression, and disability) and to appreciate the connection between muscle health and pain.

Following this brief introduction, a 12-step process, designed to lead to optimal pain management, unfolds. Most of the steps rely heavily on the use of psychological techniques to overcome the mental limitations associated with chronic pain. Chapters devoted to "buying in" to the emotional component of chronic pain, body awareness, preferential thinking, detachment, and mind physiotherapy, while somewhat redundant at times, offer patients alternative approaches to dealing with chronic pain. Individual chapters on relaxation and exercise, drugs, food, and the physics of movement are helpful as well.

Perhaps some of the most useful portions of the book are the illustrated exercises and self-assessment quizzes provided to help patients assess pain. Visual analog scales are presented as objective measures of pain. Pain sufferers are encouraged to document fluctuations in pain intensity over time in conjunction with time/activity/pain charts. There are questionnaires to assess attitude and motivation and to measure ability to cope with pain-activating triggers and deal with feelings about pain.

Dr Marcus concludes with a hypothetical patient who anticipates a stress-induced exacerbation of his chronic pain due to an important meeting at work. He relates how the patient calls into play each of the 12 steps during his workday to manage his pain appropriately. This example aptly illustrates the interplay of the various skills that can be used to control pain.

For the family physician who may be unfamiliar with nondrug or nonsurgical interventions in chronic pain management, this book provides inexpensive, enlightening, and interesting reading. It is

not an academic textbook on pain management and is not intended to fill that role. It is patient-oriented and, if nothing else, may provide insight into what your patients are reading.

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Managing Your Migraine. Susan L. Burks. Humana Press, Totowa, NJ, 1994, 248 pp, $22.50. ISBN 0-89603-277-9.

Managing Your Migraine: A Migraine Sufferer's Practical Guide by Susan Burks, MEd, and with a forward by Fred Sheftell, MD, is a gem for millions of migraineurs seeking more effective migraine management. As scientific understanding and treatment of migraine have advanced, perhaps the greatest remaining obstacle to effective care is education. Drawing from her own experience with migraine, Burks compassionately builds a foundation for migraineurs to understand and participate in effective migraine management.

This book provides comprehensive, practical advice on diet, stress, medication, and lifestyle modification. The information is not the usual "laundry list" of advice but an experiential journey into self-responsibility. It defines migraine as a chronic condition requiring commitment of patient and physician alike. Realistic management goals and available educational resources for migraineurs are provided.

Perhaps the book's greatest asset is a focus on a successful therapeutic relationship between physician and patient. Following advice outlined in this book, migraineurs are encouraged to educate themselves and actively participate in their medical care. The book supports a holistic self-responsible approach to migraine.

The explanations of migraine-triggering factors and the threshold concept of migraine potentiation are particularly important. Dietary risk factors are thoroughly discussed, with recommended diet modifications supported with recipes and meal plans.

A list of nonheadache drugs that may potentiate migraine is included. The association of these drugs and migraine are often overlooked in the busy activity of medical practice, making this chapter illuminating for patient and physician alike.

From a critical viewpoint, the subject of daily analgesic usage and chronic daily headache is not sufficiently emphasized. On the other hand, migraine medications are well reviewed in terms of effectiveness, contraindications, and associated side effects. Comments on some of the nuances of many drugs are provided. The information is concise and accurate, though there is room for disagreement regarding use of some specific drugs, such as the implication that corticosteroids could be used at a frequency of once a month.

Overall, I think Burks' book is an exceptional addition to the educational needs of the migraine population. It portrays migraine with sincere compassion. I believe it offers didactic material suitable for physicians, migraine sufferers, and family members.

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Office Practice of Medicine (3rd Edition). William T. Branch, Jr (ed). W. B. Saunders Co, Philadelphia, Pa, 1994, 1154 pp, $102.75. ISBN7216-4338-8.

This text grew out of the primary care training curriculum used at Brigham and Women's Hospital in Boston, Massachusetts. Dr Branch has assembled an impressive array of generally Boston-based physicians to write each chapter. I placed the book in a central location of our family practice clinic for 2 months. When confronted with a clinical problem involving adult care, I purposely chose this text for my reference.

The book wanders between problem-oriented chapters, such as syncope, palpitations, claudication, pharyngitis and painful ear, and traditional disease-focused chapters, such as diabetes mellitus, chronic renal failure, dyspepsia, and valvular heart disease. The refreshing chapters covering preventive medicine topics and social-psychiatric problems strike at true clinic dilemmas with insightful and creative solutions.

In general, the material is up to date and clearly presented. The tables are overly wordy and Harrison text-like. The diagrams, although sparse, are carefully drawn and appropriately detailed. I found the chapters on oral lesions and auditory testing to be particularly well written and helpful. The chapter on office dermatology is disappointing, and the black-and-white photographs are not helpful. The chapters consistently stress pathophysiology, while having featherweight emphasis on theraputic modalities.

I became frustrated looking through the index to find all the references for a single disease entity. For example, I had to look in three separate places to piece together information on syphilis.

Compared with Goroll's text and other useful reference books for the busy clinician, this one has no advantages and plenty of disadvantages: too bulky, too disorganized, too expensive. Dr Branch includes chapters from professors in every medical specialty except family medicine. That says it all.

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Software Reviews

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QMR, THE QUICK MEDICAL REFERENCE, Version 2.2.2 for DOS. First Data Bank/Camdat Corporation, 359 North Gate Drive, Warrendale, PA 15086 (800-875-8355, 412-934-2850; fax: 412-934-2855). Network version: price available on request; single user (DOS, Windows, and Macintosh), $645; physicians who identify themselves as AAFP members will receive a $100 discount.

DOCUMENTATION: 250 pp, 3-ring bound loose-leaf.

HOW SUPPLIED: Two 3.5-in. diskettes or CD-ROM.

HARDWARE REQUIREMENTS: DOS: DOS 3.0 or greater, 640K RAM (430 RAM free), 5.5MB hard disk space. Also available but not reviewed: Microsoft Windows: Windows 3.1 or greater, 1MB RAM, 5.5MB hard disk space; Macintosh: System 7, 1MB RAM, 5.5MB hard disk space.

MOUSE SUPPORT: Yes (optional).

TOLL-FREE CUSTOMER SUPPORT: Yes.

DEMONSTRATION DISKS: Yes.

MONEY-BACK GUARANTEE: Yes (30-day free trial).

RATING: Good.

QMR is a knowledge base containing more than 634 diseases oriented toward inpatient medicine, lacking common outpatient diagnoses, such as dysfunctional uterine bleeding and ankle sprain. Its purpose is to assist with differential diagnosis in cases that are diagnostically challenging. *QMR* is a "frame-based" expert sys-

tem, in that it represents each disease as a matrix of numerical ratings for a set of clinical findings. To add a disease to *QMR*'s database, researchers review the literature to compile clinical findings relevant to the disease and then assign a numerical rating to each finding for sensitivity, positive predictive value, and clinical importance.

QMR's installation is spartan but functional. The user must enter a serial number; otherwise, there is not copy protection. Like most DOS programs, *QMR* has a windowed text interface and a menu bar with drop-down menus. It requires minimal typing skills and familiarity with certain important keystroke combinations. Mouse support is optional. Windows and Macintosh versions of *QMR* have recently become available but are not included in this review. *QMR* has a useful, complete online tutorial. It is possible to use the tutorial as an example and jump back to the program, although navigation of these links can be confusing.

I tested *QMR* on an IBM PS/2–50, a clone DX 486-66, and a Compaq Pentium 60 MHz PC. Screen changes generally took less than a second on each computer. In contrast, *QMR*'s major competitor, *Iliad* for Windows (Applied Informatics, Salt Lake City, Utah), took many times longer to perform similar functions.

QMR can perform four main functions: (1) generate a differential diagnosis from a set of clinical findings; (2) create a simulation consisting of a set of clinical findings and a "correct" diagnosis; (3) act as an electronic textbook of medicine, profiling diseases by findings, suggested work up, related diagnoses, and relevant journal articles; and (4) link automatically to MEDLINE using *Grateful Med* software (this requires purchase and installation of *Grateful Med*).

Learning *QMR* requires several hours of work on the tutorial, and enough time and experience to enter clinical findings accurately and completely.[1,2] There are 4653 clinical findings, including patient history, physical examination, and laboratory tests. Many of the findings are quite specific and sometimes expressed in ungrammatical, awkward phrases; the lack of general, familiar expressions could be daunting to the casual user. "Term Completer" accepts a text fragment and presents a list of matching findings from which the user chooses. For example, typing "murmur" produces a list of 50 findings, such as "Heart Murmur Systolic Left Sternal Border Increased after Premature Contraction." It is worth scanning the Findings Index to get a feel for the working and range of findings available in *QMR*. Once *QMR* has generated a differential diagnosis, users can further ask *QMR* to suggest additional findings that may differentiate among proposed diseases to further define the differential diagnosis.

The process of entering, analyzing, and reanalyzing a patient case in *QMR* requires significant amounts of time, an important limitation in outpatient settings. *QMR* is helpful in analyzing difficult cases, if the clinician feels it is worth 15 minutes. Many busy clinicians will find that phoning a human consultant is more user-friendly and less labor intensive than entering data into *QMR*. However, *QMR* can provide a rich learning experience, especially for students.

With the assistance of specially trained clinician *QMR* operators, *QMR* has functioned successfully as an electronic consultant for difficult internal medicine inpatient cases in research settings.[3] A recent study evaluated the clinical performance of four computerized diagnostic systems (*QMR*, *DXplain*, *Iliad* and *Meditel*) against 10 expert clinicians. The developers of each program entered 105 patient cases. *QMR* selected the correct diagnosis as its number one choice about 20% of the time, and listed the correct diagnosis among its top 30 differential diagnosis list about 50% of the time.[4] *QMR*'s performance was surprisingly similar to that of the other three programs, except that it tended to get the number one choice right more often, but had a less complete top-30 list. Each program suggested an average of two diagnoses that the expert had not considered but agreed was a valid addition to the differential diagnosis.

QMR and *Iliad* have almost identical features, except that *Iliad*'s clinical simulation module provides extensive, real-time feedback on the user's performance, while *QMR* does not. *QMR* provides the automated link to the MEDLINE database, which *Iliad* lacks.

QMR is an inpatient internal medicine differential diagnosis generation program that suggests diagnoses even expert clinicians may not have considered. It cannot be relied on to select a single correct diagnosis. It requires an investment of time to become proficient and to enter each patient's data. These requirements restrict its clinical use to difficult cases. Its simulation mode, disease profiles, and linkage to MEDLINE provide unique educational opportunities. I would recommend it for teaching programs and practices that commonly deal with internal medicine diagnostic dilemmas.

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References

1. Bankowitz RA, Blumenfeld BH, Janosky J. A prospective analysis of inter-rater agreement between a physician and a physician's assistant in selecting *QMR* vocabulary terms. In: Stead WW. Proceedings: the Fifteenth Annual Symposium on Computer Applications in Medical Care. New York: McGraw-Hill, 1991:609–13.
2. Bankowitz RA, Blumenfeld BH, Giuse Bettinsoli N, et al. User variability in abstracting and entering printed case histories with *Quick Medical Reference* (*QMR*). In: Stead WW, ed. Proceedings: the Eleventh Annual Symposium on Computer Applications in Medical Care. New York: IEEE Computer Society Press, 1987:68–73.
3. Bankowitz RA, McKneil MA, Challnor SM, Parker RC, Kapoor WN, Miller RA. A computer assisted medical diagnostic consultation service. Ann Intern Med 1989; 110: 824–32.
4. Berner ES, et al. Performance of four computer-based diagnostic systems. N Engl J Med 1994; 330:1792–6.