

Procedure Selection in a Health Maintenance Organization Patient

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For identical patients, physicians have been shown to select different diagnostic and therapeutic procedures, depending on the practice setting and payment mechanism.¹ This report demonstrates how one physician was faced with ethical decisions and financial incentives in choosing a particular treatment course for a health maintenance organization (HMO) patient.

CASE REPORT

The patient, a 34-year-old woman, discussed her options for surgical sterilization with her family physician. After counseling the couple, her physician agreed that the husband and wife were good candidates for permanent sterilization. She was employed and a member of a health maintenance organization, for which her physician received a monthly capitation. Her husband did not have health insurance. After discussing the minilaparotomy and laparoscopic tubal ligation procedures, which were covered under the wife's HMO plan, and after discussing the vasectomy, which the couple would pay for themselves on a fee-for-service basis, they left to discuss the options.

The patient returned six weeks later with amenorrhea and pelvic pain. She had a positive pregnancy test, and a tender right adnexa. Pelvic ultrasound confirmed an intrauterine pregnancy. The couple requested a voluntary termination of pregnancy procedure and a tubal ligation, both procedures paid for by her HMO plan. In day surgery she underwent a suction curettage and minilaparotomy tubal ligation performed by her physician.

DISCUSSION

The most interesting aspect of this case is not the patient's medical needs but rather the effect the patient's payment status had on the choice of procedures.

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The patient had been enrolled in this practice for four months for which the physician received a capitated payment of \$17.43 per month. The patient's physician performs minilaparotomy, but not laparoscopic tubal ligations. Patients requesting pregnancy termination procedures are referred to other physicians to be handled as outpatients. Vasectomies are done as an office procedure for a charge of \$100.

In this HMO plan, the day surgery or operating room fees are paid out of a "shared hospital pool," so the family physician would not pay those fees out of capitated funds. Consultant fees, however, including anesthesia and gynecologist professional fees, would be paid directly from the physician's capitated funds. The family physician, by performing the pregnancy termination and tubal ligation procedures, would "pay himself" those consultant fees, thereby quickly reaching the threshold limit of \$725 per patient per year, the amount above which the HMO reimburses the physician for 80 percent of the dollar amount.

Aware of these financial considerations, the physician raised these questions: "Should I have done his vasectomy for free? Should I encourage minilaparotomy over laparoscopic tubal ligation so I can do it myself at a cost savings? Although I do not like doing pregnancy terminations, do I dislike them enough to pay another physician to do them for me?"

The patient and her husband were counseled about their options and decided to opt for their physician's recommendation. The lowest cost option for the physician was to refer the patient for an outpatient pregnancy termination and to do the vasectomy at no charge. The highest cost option was to refer the woman to a gynecologist to do the pregnancy termination and laparoscopic tubal ligation. The option chosen by the family physician was to do both procedures himself, the pregnancy termination and the minilaparotomy tubal ligation. His justification for doing the pregnancy termination himself was that, although "mildly ethically opposed" to it, he could technically do the procedure. He felt that he could provide a good service to the patient, and in not referring her, he would save his practice from paying someone else to do it. In performing the minilaparotomy, rather than in referring for the laparoscopic tubal ligation, the physician

justified the choice as "a reasonable option, as safe, not a lot more uncomfortable to the patient, and certainly at a substantial cost savings to my practice."

This case illustrates some of the financial, clinical, and ethical dilemmas apparent in prospective payment systems. Compared with staff model HMOs, group model HMOs, and retrospective reimbursement systems, where physicians are less aware of the impact of one patient, the structure of the capitation-model HMO increases the awareness of the immediate financial impact of the high-cost patient.

There are data available that describe how savings are achieved under HMO contracts. It is generally felt that savings occur through lowering hospitalization rates and increasing ambulatory services.^{2,3} Other studies suggest that, in group model HMOs, physicians make clinical decisions based more on peer review and collegial pressure than on client pressure when compared with their fee-for-service colleagues.^{4,5} No adequate data exist to describe how clinical decisions are made in staff model or primary care HMOs, where direct financial incentives exist to reduce services. Concern exists that HMO contracts may force a conflict of interest for the physician that ". . . may alter the physician-patient relationship in ways that neither likes" by encouraging an adversarial relationship.⁶ As Relman⁷ stated, "Withholding or skimping on needed services [the possible abuse in the prospective payment system] is no more reprehensible than providing unneeded or inappropriate service [the possible abuse in the charge reimbursement system]. Financial arrangements that tempt physicians in either direction ought to be avoided."

As demonstrated in this report, in prospective payment systems, financial incentives for reducing services or altering procedure selection exist. Wennberg et al⁸ and Perkoff⁹ point out that physicians must begin by evaluating

critically clinical procedures and methods that are expensive and of questionable value to the patient, or, as stated by Thurow,¹⁰ not consider a procedure bad ". . . simply because it has absolutely no payoff or because it hurts the patient—but also because the costs are not justified by the marginal benefits." Additionally, it would be helpful to better understand physician and patient behavior in prospective payment systems, as data derived from group model HMOs may not apply to staff model or primary care HMOs.

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specimen is drawn in through a small hole at the end. After withdrawal, the tip is cut off and the specimen pushed out into the biopsy container. The specimen is then handled as a tissue biopsy.

I have had excellent results using this device. A tenaculum is necessary about one half of the time and the uterine sound in about one quarter of cases. Only in situations where the cervical os was stenotic and the sound could not be passed without considerable discomfort were we unable to obtain adequate specimens.

The device was originally produced in France and is available from Unimar in Wilton, Connecticut.

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PROPHYLAXIS OF ENDOCARDITIS

To the Editor:

I have recently read the article "Infective Endocarditis" by Richard H. Birrer, Mitchell Karl, and Salvatore Volpe (*J Fam Pract* 1987; 24:289-295) in which they discuss the pathogenesis, diagnosis, medical therapy, prophylaxis, surgery, and prognosis of infective endocarditis. As an oral and maxillofacial surgeon, I was especially interested in their comments concerning antimicrobial prophylaxis for the prevention of infective endocarditis.

The recommendations that they presented on p 294 of their article quoted the American Heart Association recommendations for prophylaxis, which were advocated in the 1977 recommendations. Since that time, however, the American Heart Association has updated its recommendations with several very significant changes.¹ The major changes are that the penicillin prophylaxis is given preoperatively, one hour before the procedure and only one time postoperatively, instead of the eight doses

recommended in 1977. The second change is that instead of recommending penicillin and streptomycin for higher risk patients, the 1984 recommendations suggest the use of ampicillin and gentamicin.

One of the major thrusts of the current recommendation, as it has been in the past also, is that the physician and the dentist must work closely together with each patient. My concern is that if dentists are using the 1984 recommendations and the patient's physician is still adhering to the 1977 recommendations, as recommended by Birrer, et al, then there will be confusion and disagreement. While it is clear that no hard data exist to support one protocol over another, a consistent policy among health care professionals would seem to be highly desirable.

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OBSTETRICS IN FAMILY PRACTICE

To the Editor:

The articles on obstetrics in the February issue of the *Journal of Family Practice* were very timely and informative.¹⁻³ The Health Care Services Committee of the Oregon Academy of Family Physicians (OAFP) recently completed a survey that extends the findings of the Ohio and Alabama studies.⁴

Family physicians were polled via a questionnaire mailed with the summer 1987 issue of the *Oregon Family Physician*. Three hundred twenty-seven questionnaires were returned.

Two hundred thirty-two respondents were academy members, representing approximately 45 percent of the 521 active OAFP members. Mean age was 46 years. Ninety percent were male.

One hundred thirty-two respondents (42 percent) reported currently performing nonoperative obstetrics. One hundred forty-eight (47 percent) reported formerly doing obstetrics. Of this group, 75 (51 percent) listed malpractice premiums as the primary reason they abandoned obstetrics. Sixty-seven (45 percent) listed lifestyle considerations, 16 (11 percent) other legal, and 7 (5 percent) other economic. Only one person reported stopping primarily because of inability to obtain or maintain privileges. Forty-nine physicians gave up obstetrics in the last year, a 27 percent decrease in one year. One hundred seventeen (37 percent) reported currently performing outlet forceps or vacuum extractions. One hundred thirty individuals reported formerly offering these services. The primary reasons given for stopping were malpractice premiums (52 percent), and other legal reasons (13 percent). Sixty respondents reported performing cesarean deliveries (19 percent), while 80 reported having given up this service.

The Oregon Medical Association (OMA) published a special report to the OMA House of Delegates in 1986, which included some similar findings.⁵ They mailed 1,032 questionnaires to Oregon family physicians, to which they received 839 responses (81 percent). Of these, 314 (37 percent) reported having engaged in obstetrics within the prior two years. Of the 314, 83.7 percent were currently doing obstetrics, while the remainder had recently stopped. An additional 11 percent reported planning to stop, and 29 percent more were considering stopping. The reasons given for restricting obstetrical practice were as follows: malpractice insurance too expensive (65.6 percent), malpractice exposure too risky (56.1 percent), not

enough patients paying full fees (34.4 percent), and too stressful (25.6 percent).

It is clear that a crisis in obstetrical practice by family physicians also exists in this state. The problem demands attention.

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ADVERSE DRUG REACTIONS

To the Editor:

Having read the data presented in their article by Davidson et al (*Davidson KW, Kahn A, Price RD: Reduction of adverse drug reactions by*

computerized drug interaction screening. J Fam Pract 1987; 25:371-375), I come to an opposite conclusion from theirs.

Very few of their drug/drug interactions were felt even by them to be significant, and a reminder that drugs and alcohol are likely not to mix is not worth the burden, financially and timewise, of a computerized drug interaction program to be invoked at every or nearly every clinical contact. Such a system would, in my opinion, be little more than expensive busy-work.

I would personally prefer for those who believe these types of systems are necessary safeguards to repeat in a prospective fashion the studies they quote that say avoidable adverse drug reactions are significantly prevalent. The studies cited by these authors are rather old, and even if they were, not so important that they bear repeating.

As do all able physicians, I see patients with adverse drug reactions. Many of these are unpredictable and for many, if not most, of the others the risk of their development was warranted by their clinical need for the prescription of the drugs which caused them. Furthermore, I have an uneasy feeling that the side effects reported in many computer lists are often overemphasized trivia. They have been trumpeted until they assume the force of more important truths in advertisements for new drugs, which deliberately, for mercantile reasons, speak against their usually cheaper predecessors.

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OBSTETRICS IN FAMILY PRACTICE

To the Editor:

This is just a note to congratulate Dr. Rosenblatt on his excellent guest editorial in the February issue of *The Journal of Family Practice* (Rosenblatt RA: *The future of obstetrics in family practice: Time for a new direction. J Fam Pract* 1988; 26:127-129).

I found this to be one of the landmark articles that hit the very core of a problem, diagnosed what was going on, and came up with a very workable and positive solution. This three-page article formulates what had been going through my head for the past five years. Something is wrong with the way family physicians are doing obstetrics! I could not put my finger on what it was, but Dr. Rosenblatt did. We basically are "living a lie" by trying to be mini-obstetricians. Truly, a different paradigm is needed.

The approach to bonding with midwives and become expert in a different type of obstetrics is exciting, innovative, and just what the United States needs. I hope the leaders in family medicine can further explore this approach.

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Minnesota, Mankato

1987 Year Book of Family Practice. Robert E. Rakel, (ed). Year Book Medical Publishers, Chicago, 1987, pp. 612, \$42.95. ISBN 0-8151-7017-3.

Reading and applying information found in the *1987 Year Book of Family Practice* can facilitate the busy physician's desire to practice excellent patient care. The 11th edition of the *Year Book* seeks to tap the world medical literature, withdraw significant advances, and present the information in a concise, practical fashion. This endeavor is useful because the average family physician lacks the resources to review the 679 journals purportedly examined by the editors.

Each of the 400 articles selected for this year's edition are characteristically summarized and editorialized on only one page for easy reading. Occasionally, figures graphically summarize the article. The summaries are uniformly clear and concise. The editorials generally supplement the primary article's content with other referenced material. I was occasionally left wondering, however, where fact left off and anecdote began.

The *1987 Year Book* serves the busy clinician well. Its accomplished editorial staff cast a wide net to harvest practical information of concern to primary physicians intent on staying current with expanding medical knowledge. Using the *Year Book* while maintaining one's own professional reading, consulting on perplexing patient problems, and attending focused continuing medical education conferences provides a good start for family physicians to keep up to date.

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Textbook of General Medicine and Primary Care. John Noble (ed). Little, Brown and Company, Boston and Toronto, 1987, 2,376 pp, \$85. ISBN 0-317-53603-6.

This easily used encyclopedic textbook is intended to be the reference of choice for primary care physicians in the office, the clinic, and the emergency room. Organized into four major sections, the compendium provides generous illustrations, diagrams, and tables. With the exception of an excellent section on the medical care of hospitalized surgical patients, the text deals exclusively with the management of ambulatory patients, the principles to be followed, and the pitfalls to be avoided.

The first section, "The Primary Care Patient," presents good discussions on interview techniques, psychosocial implications of care, medical genetics, primary care and the law, and occupational and environmental health.

The section on emergencies opens with an overview of emergency medical systems and the training levels of various paramedical personnel. Twelve crisply written chapters cover the full spectrum of problems that are present in the emergency room. Other than the chapter on emergency treatment of infants and children, there is no inclusion of pediatric medicine in this text. Since many primary care physicians are confronted by the need to manage children of all ages, brief chapters on well-child care and the management of usual childhood diseases would have been useful.

Section III addresses the full range of topics normally found in a medical textbook. Very helpful chapters have been written on hematology, derma-

tology, soft tissue rheumatism, and headaches among many others. Unexpected are the superbly done unique chapters on dental and ears, nose, and throat medicine.

The final section contains practical approaches to the management of the surgical patient, the adolescent, the geriatric patient, and others in special circumstances.

This text meets the objectives of the editor well. Primary care physicians will reach for it frequently.

*D. Stratton Woodruff MD
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Pediatrics (18th Edition). Abraham M. Rudolph (ed). Julien I. Hoffman. Appleton & Lange, Norwalk, Connecticut, 1987, 1952 pp. \$85.00. ISBN 0-8385-7796-7.

This textbook of pediatrics serves as an excellent reference source of general pediatrics, covering the wide range of childhood diseases. The classical presentation of disease, according to body systems, is utilized. The discussions of the diagnostic and therapeutic aspects of diseases are concise and well written. The presentations of biological mechanisms underlying the diagnosis and management of disease are easily understood. What this book attempts to accomplish, it does well.

From the perspective of a primary health care professional (pediatrician, family physician, nurse practitioner, or medical student) there are several important limitations.

The information presented is oftentimes fragmented so that one is required to look in more than one location to put together a comprehensive

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sive thought process for a single classical presentation. For example, the subject of immunization is covered primarily under each separate disease with only a very brief description of the general topic under its own heading.

The most common presentation to the clinician is by signs and symptoms, and there is little available in this text addressed to the overall clinical presentation with specific suggestions for evaluation and treatment.

A large number of areas of importance to primary care physicians are inadequately discussed in this text. Some of these include day care health issues, adolescence, screening in pediatric practice, and family and psychosocial issues involved in health care.

With an understanding of its limitations, this text is an excellent addition to the primary care library.

Louis Menachof, MD
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Harrison's Principles of Internal Medicine, Eleventh Edition, Companion Handbook. Eugene Braunwald, Kurt J. Isselbacher, Robert G. Petersdorf, Jean D. Wilson, Joseph B. Martin, Anthony S. Fauci (eds). McGraw-Hill, New York, 1988, 791 pp., \$21.95 (paper). ISBN 0-07-07264-7.

Harrison's Principles of Internal Medicine Companion Handbook endeavors to provide a pocket-sized reference that "residents and students can use on their trek through the inpatient, outpatient, and emergency services of a teaching hospital" when accessibility or time precludes consultation of the larger *Harrison's*. The 7 × 4 × $\frac{15}{16}$ -inch, 14-ounce manual is divided into chapters keyed to comparable parts of the larger edition.

The *Handbook* provides a nice overview of historical features, physical findings, laboratory abnormalities, differential diagnoses, potential complications, and therapies of medical conditions. When evaluating the

Handbook on inpatient rounds, however, the house officers and I found the therapeutics sections sketchy. We also found many minor annoyances: phenacetin was listed as an analgesic, complete with dosage and interval, indomethacin dosage was described as 50 to 75 mg every four hours, isoproterenol was listed as being equal to albuterol for inhalation therapy in asthma, status asthmaticus was defined as "obstruction persisting for days or weeks" rather than defined by severity and recalcitrance to therapy, there was a misprinted nitrogen balance equation, and so forth.

This *Handbook* is a first edition. With deletion of drugs of historical interest and provision of specific, detailed therapeutic information, this volume has great future potential. Because therapeutics handbooks seem to be what house staff desire in their pockets, I doubt this book, in its current form, will become as familiar a pocket reference as the *Manual of Medical Therapeutics* ("Washington Manual") or the *Harriet Lane Handbook*. Currently, this book will be useful to medical students and to house officers who need a fast refresher prior to rounds, patient encounters, or examinations.

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Alcoholism: A Guide for the Primary Care Physician. Henrietta N. Barnes, Mark D. Aronson, Thomas L. Delbanco (eds). *Frontiers of Primary Care Series*, Mack Lipkin, Jr., (ed). Springer-Verlag, New York, Berlin, Heidelberg, 1987, 229 pp., price not known. ISBN: 0-387-96545-9.

This readable book was written for primary care physicians who will find its 25 chapters packed full of pertinent and practical information to improve their management skills in the area of substance abuse, primarily alcoholism. The well-organized format

makes it suitable for both a study and a reference source for medical students, residents, and family physicians in the early detection and possible treatment protocols of alcohol abuse. The series editor plans to report fundamental and applied research findings in clinically relevant, readable ways to meet the needs of overlapping groups of practitioners, teachers, and researchers in primary medicine. The editors of this book set out not only to illustrate through the experiences of primary care physicians the approaches in making the diagnosis of alcoholism and the methods of discussing the diagnosis with the patient and instituting treatment primarily in the physician's office, but also to emphasize the importance of the primary physician's involvement in the hospitalized patient. In my opinion the editors of this book have succeeded well in their objectives, making this work especially relevant to family physicians.

The book is divided into free-standing sections for the discussion of seven topics dealing with alcoholism: general concepts, clinical pharmacology, primary care, community resources, medical complications, special populations, and ethical and legal issues. The readers will learn how to deal with their own feelings of frustration when seeing a reluctant patient who, unlike the usually receptive patient, does not appreciate the offer, or may flatly refuse, to accept the offer of help. The illustrations are practical case histories that demonstrate tools for screening (the CAGE questions), diagnosis (MAST questionnaire), how to present the diagnosis, and then how to negotiate the treatment. The special population groups section will help family physicians deal with the family members of alcoholism and also understand how the cultural and family background affect his patient.

I wish this book had been available during my 24 years in family practice. I recommend the book to busy practicing physician and residents as an efficient reference text.

Reuben B. Widmer, MD
Green Valley, Arizona

The Journal welcomes Letters to the Editor, if found suitable, they will be published as space allows. Letters should be typed double-spaced, should not exceed 400 words, and are subject to abridgment and other editorial changes in accordance with journal style.

ETIOLOGY OF IMPOTENCE

To the Editor:

I am responding to a Clinical Review article entitled "Erectile Impotence: Evaluation and Management," by John E. Heller and Paul Gleich (*J Fam Pract* 1988; 26:321-324).

Based on the published literature and clinical experience, the article is seriously misleading and inaccurate. Citing articles by Montague and Zorngiotti, Heller and Gleich state "... that only a few cases of impotence are psychogenic, and that most cases have an organic cause." The articles they cite do not support this sweeping claim, nor am I aware of any evidence that would.

Heller and Gleich also leave the distinct impression that a psychotherapeutic approach will have a low success rate. In fact, the behavioral treatment pioneered in the 1950s by Masters and Johnson, when applied to appropriate candidates, is one of the most highly successful forms of psychotherapy today. Moreover, the level of understanding demonstrated by Heller and Gleich on psychogenic causes is appalling. The simplistic notion that "when stress subsides, the ability to have erections usually returns to normal" is not supported by the clinical literature.

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The preceding letter was referred to Drs. Heller and Gleich, who respond as follows:

We appreciate the opportunity to respond to Dr. Greico's letter. The prevalence of organic impotence is, contrary to Greico's statement, well

documented. Exact percentages obviously vary from study to study. The point of our article was, however, that the classification of impotency into organic and psychogenic causes should never be made on purely statistical grounds. Rather, each patient should be carefully evaluated and treated appropriately. In the past, impotent men were all too often assumed to have psychogenic impotence simply because most impotence was felt to be psychogenic.

When we mentioned the poor response rate of impotence to psychotherapy in the past, we did not mean to imply that treatment of psychogenic impotence presently has a low success rate. As Dr. Greico states, behavioral treatment is very successful "when applied to appropriate candidates." Men with organic impotence cannot be expected to respond.

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DINAMAP BLOOD PRESSURE MONITOR

To the Editor:

The study by Dr. Ornstein et al (*Ornstein S, Markert G, Litchfield L, Zemp L: Evaluation of the DINAMAP blood pressure monitor in an ambulatory primary care setting. J Fam Pract* 1988; 26:517-521) on the DINAMAP blood pressure monitor may be flawed sufficiently to account for the discrepancies found. The DINAMAP is a motorized, mildly formidable device. People not used to it respond to the first reading in a series with an elevation of systolic blood

pressure, which the DINAMAP is sensitive enough to record. A simultaneous mercury sphygmomanometer may not be so quick. I think a comparison between systolic pressures (DINAMAP vs Hawksley) on the first reading and then on the fourth reading will show less discrepancy between the two on the latter reading. Dr. Ornstein is correct in pointing out the error that is introduced by using the DINAMAP for single, isolated blood pressure readings in a clinic setting.

The DINAMAP is invaluable precisely for its ability to respond to and to record the lightning blood pressure changes that occur from minute to minute in response to psychophysiologic stimuli of all sorts. Dr. James Lynch at the University of Maryland using the DINAMAP has studied this extensively. I would not like to see his valuable work discredited by a study that shows the DINAMAP is not a good instrument for single blood pressure readings to save time and personnel in a clinic. In my practice, it has done the reverse: blood pressure readings are now a 45-minute intensely human encounter between myself and my patient during which the constant DINAMAP monitoring is invaluable in its ability to open the patient's awareness to himself as a person, not a faulty hydraulic system.

John G. Maines, MD
Ithaca, New York

The preceding letter was referred to Dr. Ornstein, who responds as follows:

I was pleased to see Dr. Maines's interest in our study of the DINAMAP blood pressure monitor.¹ He proposes that the observed differences between DINAMAP and Hawksley systolic blood pressure determinations were limited to the first pair of

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The following is a brief summary only. Before prescribing, see complete prescribing information in CEFTIN® (cefuroxime axetil, Glaxo) Tablets product labeling.

CONTRAINDICATIONS: CEFTIN® is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

WARNINGS: BEFORE THERAPY WITH CEFTIN® IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE TO DETERMINE WHETHER THE PATIENT HAS HAD PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS, PENICILLINS, OR OTHER DRUGS. THIS PRODUCT SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. ANTIBIOTICS SHOULD BE ADMINISTERED WITH CAUTION TO ANY PATIENT WHO HAS DEMONSTRATED SOME FORM OF ALLERGY, PARTICULARLY TO DRUGS. IF AN ALLERGIC REACTION TO CEFTIN OCCURS, DISCONTINUE THE DRUG. SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

Pseudomonas colitis has been reported with the use of cephalosporins (and other broad-spectrum antibiotics); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with antibiotic use.

Treatment with broad-spectrum antibiotics alters normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis. Cholestyramine and colestipol resins have been shown to bind the toxin in vitro.

Mild cases of colitis may respond to drug discontinuance alone. Moderate to severe cases should be managed with fluid, electrolyte, and protein supplementation as indicated.

When the colitis is not relieved by drug discontinuance or when it is severe, oral vancomycin is the treatment of choice for antibiotic-associated pseudomonas colitis produced by *C. difficile*. Other causes of colitis should also be considered.

PRECAUTIONS: General: If an allergic reaction to CEFTIN® occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, eg, antihistamines, pressor amines, or corticosteroids.

As with other antibiotics, prolonged use of CEFTIN may result in overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

Broad-spectrum antibiotics should be prescribed with caution for individuals with a history of colitis.

Information for Patients: (Pediatric) CEFTIN is only available in tablet form. During clinical trials, the tablet was well tolerated by children who could swallow the tablet whole. Children who cannot swallow the tablet whole may have the tablet crushed and mixed with food (eg, applesauce, ice cream). However, it should be noted that the crushed tablet has a strong, persistent, bitter taste. Discontinuance of therapy due to the taste and/or problems of administering this drug occurred in 13% of children (range, 2% to 28% across centers). Thus, the physician and parent should ascertain, preferably while still in the physician's office, that the child can ingest CEFTIN reliably. If not, alternative therapy should be considered.

Interference with Laboratory Tests: A false-positive reaction for glucose in the urine may occur with copper reduction tests (Benedict's or Fehling's solution or with Clinitest® tablets), but not with enzyme-based tests for glycosuria (eg, Clinistix®, Tes-Tape®). As a false-negative result may occur in the ferricyanide test, it is recommended that either the glucose oxidase or hexokinase method be used to determine blood plasma glucose levels in patients receiving CEFTIN. Cefuroxime does not interfere with the assay of serum and urine creatinine by the alkaline picrate method.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Although no long-term studies in animals have been performed to evaluate carcinogenic potential, no mutagenic potential of cefuroxime was found in standard laboratory tests. Reproductive studies revealed no impairment of fertility in animals.

Pregnancy: Pregnancy Category B: Reproduction studies have been performed in rats and mice at doses up to 50 to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cefuroxime axetil. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: Since cefuroxime is excreted in human milk, consideration should be given to discontinuing nursing temporarily during treatment with CEFTIN® (cefuroxime axetil, Glaxo).

ADVERSE REACTIONS: The adverse reactions to CEFTIN® are similar to reactions to other orally administered cephalosporins. CEFTIN was usually well tolerated in controlled clinical trials. Pediatric patients taking crushed tablets during clinical trials complained of the bitter taste of CEFTIN Tablets [see ADVERSE REACTIONS: Gastrointestinal and PRECAUTIONS: Information for Patients: (Pediatric)]. The majority of adverse events were mild, reversible in nature, and did not require discontinuance of the drug. The incidence of gastrointestinal adverse events increased with the higher recommended doses. Twenty-five (25) patients have received CEFTIN 500 mg twice a day for one to 2.5 months with no increase in frequency or severity of adverse events. The following adverse reactions have been reported.

Gastrointestinal: Nausea occurred in 2.4% of patients. Vomiting occurred in 2.0% of patients. Diarrhea occurred in 3.5% of patients. Loose stools occurred in 1.3% of patients. There have been rare reports of pseudomonas colitis.

Crushed tablets have a bitter taste. In pediatric clinical studies conducted with crushed tablets, complaints due to taste ranged from 0/8 (0%) in one center to 47/71 (66%) in another center.

Hypersensitivity: Rash (0.6% of patients), pruritus (0.3% of patients), and urticaria (0.2% of patients) have been observed. One case of severe bronchospasm has been reported among the approximately 1,600 patients treated with CEFTIN. Of the patients treated with CEFTIN who reported a history of delayed hypersensitivity to a penicillin and not a cephalosporin, 2.9% of patients experienced a delayed hypersensitivity reaction to CEFTIN.

Central Nervous System: Headache occurred in less than 0.7% of patients, and dizziness occurred in less than 0.2% of patients.

Other: Vaginitis occurred in 1.9% of female patients.

Clinical Laboratory Tests: Transient elevations in AST (SGOT, 2.0% of patients), ALT (SGPT, 1.6% of patients), and LDH (1.0% of patients) have been observed. Eosinophilia (1.1% of patients) and positive Coombs' test (0.4% of patients) have been reported.

In addition to the adverse reactions listed above that have been observed in patients treated with CEFTIN, the following adverse reactions and altered laboratory tests have been reported for cephalosporin class antibiotics:

Adverse Reactions: Allergic reactions including anaphylaxis, fever, colitis, renal dysfunction, toxic nephropathy, and hepatic dysfunction including cholestasis.

Several cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment when the dosage was not reduced. If seizures associated with drug therapy should occur, the drug should be discontinued. Anticonvulsant therapy can be given if clinically indicated.

Altered Laboratory Tests: Increased prothrombin time, increased BUN, increased creatinine, false-positive test for urinary glucose, increased alkaline phosphatase, neutropenia, thrombocytopenia, and leukopenia.

LETTERS TO THE EDITOR

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simultaneous measurements. He is also concerned that our study may discredit the work of Dr. James Lynch, who has documented variability in blood pressure in response to psychophysiologic stimuli.^{2,3,4} Both of these assumptions are incorrect.

Systolic blood pressure determinations by the DINAMAP and Hawksley were different for each pair of measurements. The mean difference between the two instruments for all determinations was 7.6 mmHg, as reported in Table 3 of our report. The differences for the first through fourth pairs of measurements were 7.5, 8.5, 7.3, and 7.3 mmHg, respectively. These differences are all statistically significant (paired *t* test, *P* = .0001).

Our paper does not discredit Dr. Lynch's work in which the DINAMAP was employed. Indeed, we noted that the DINAMAP may be well suited to assess minute-to-minute changes in blood pressure. The intent of our report was to question the wisdom of replacing standard mercury sphygmomanometers with DINAMAP monitors in settings where accurate blood pressure determinations are important to diagnose hypertension or manage it as a chronic problem. I suspect that most primary care physicians would be unable to replicate Dr. Maines' protocol of spending 45 minutes with each patient to assess his or her blood pressure response to the stimuli of the physician-patient encounter. In addition, there is no conclusive evidence that blood pressure determinations by this method are better predictors of cardiovascular morbidity than those proposed by the American Heart Association⁵ using standard mercury sphygmomanometers.

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USEFULNESS OF HOME VISITS

To the Editor:

Balaban et al (*Balaban DJ, Goldfarb NI, Perkel RL, Carlson BL: Follow-up study of an urban family medicine home visit program. J Fam Pract* 1988; 26:307-312) concluded, in a recent report on an urban home visit program, that they could not demonstrate "a measurable sustained impact on health outcomes or utilization of health services" as measured by hospital admissions, mortality, or scores on a battery of scaled tests. The authors did not assert more than their data would support, but previous experience suggests that others may interpret the paper as evidence that home visits are worthless.

The article brings to mind another controlled study¹ that has been used as evidence against home visits, one in which nurses visited the residences of urban clinic patients with congestive heart failure. Total-hospital days per patient were about the same for the study and control groups, but admissions for congestive failure were lower with intervention while those for other cardiac problems increased. Home calls apparently led to better control of the index problem while facilitating more effective recognition of other medical conditions needing treatment. The point is that these visits may have subtle benefits that are easily overlooked.

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