

# The Physician as Manager

## "What" and "How" of Practice Management Education

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Management science and application play a pivotal role in preparing physicians for effective and efficient office practice. Integration of management theory into practice management education of family physicians may be accomplished by developing and maintaining a well-organized model practice, involving residents directly in management decisions and problem solving, using a variety of resource people in and outside the model unit, and providing quantitative analysis of practice performance.

After three years of development, the Family Practice Center of Akron City Hospital has instituted a practice management curriculum whereby residents become actively involved in the management and supervision of the model practice, conduct research study into management problems, and receive training and supervision as they develop leadership and organizational skills.

The changing patterns of medical practice, the increasing involvement of third parties in medicine, the financial responsibilities required to establish and conduct a medical practice, and complexities of medical practice make it necessary that the physician have an understanding of basic business and management principles and their application.<sup>1</sup> In the years ahead, physicians will need to exercise alert management to succeed not only financially, but professionally, too.<sup>2</sup> As the one holding the highest responsibility in the field of medicine, a medical doctor must be responsible for those working with him/her, and thus must be a manager as well as a physician.<sup>3</sup>

At the heart of a "practice" are people: patients, physicians, nurses, receptionists, secretaries, and other medical assistants.<sup>4</sup> Practice management education must foster and develop the physician's skill in utilizing these resources so that his practice is as much of a tool for "patient management" as is his/her medical knowledge. Thus, the training of physicians in management and organizational concepts must encompass the people and setting with which the physician works. In an address to the Society of Teachers of Family Medicine in November 1975, Dr. John Millis emphasized the need for integration of "management sciences" in the training and continuing education of physicians. This is an academic charge to family medicine educators which should be answered with curriculum planning and educational methods resulting in young physicians exhibiting managerial acumen in conjunction with medical expertise.

This paper will address three areas: (1) Akron City Hospital's developmental efforts and initial results in practice management education, (2) educational objectives which may be helpful as a reference for planning of curriculum, and (3) suggested methods which have been tested and may stimulate residents to learn the art of managing human and financial resources.

### Practice Management Teaching at Akron City Hospital

Practice management education was formally introduced into the Family Practice Center of Akron's curriculum in 1973. Initial efforts included weekly seminars conducted by business consultants and individual sessions with residents concerning their plans for eventual practice. As the residency program and organization grew, it became apparent that more extensive education was necessary. In addition, with five senior residents, it became practical to plan a year-long program with a variety of learning experiences to meet their respective needs.

The educational methods which are currently in use at Akron City Hospital's family practice residency were all tested, evaluated, and modified before they were integrated into the curriculum. Favorable responses by residents and graduates were primary factors for continuation.

The *Resident Business Manager* (RBM) experience is the essence of the practice management education. This method was initiated when a few senior residents indicated an interest in a more in-depth exposure to office routines and supervision. The significance and status of the position generated enthusiasm with other residents. The following year, the RBM was an integral element of third-year training. There were several hurdles to overcome to effectively implement this "on-the-job" training. First, residents were uncertain and insecure in assuming a supervisory role. Second, the office staff had developed more of a peer relationship with residents than a subordinate role. Third, the office supervisor was unaccustomed to working on an educational level with residents. Fourth, the organizational structure of the Family Practice Center, especially administrative roles, delegation of responsibility, and

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authority was in a state of flux. These hurdles are still present to some degree. However, with the support of the residency director, coordination by the full-time faculty advisor, and maturity and confidence by the office supervisor, the RBM program has provided several positive results. These include: considerably less anxiety by residents in relating to paramedical staff as "problem solvers," fewer morale problems resulting from resident inefficiencies, increased acceptance of responsibility by the office supervisor, and greater awareness by residents of the financial procedures and nursing routines in office practice.

The year-long *seminar program* has been revamped several times. Initially, the weekly sessions were conducted by representatives from business and service organizations. Residents realized their need for knowledge in many of these allied functions. However, many of the speakers had little appreciation of their subject relative to family practice. The seminars have now been modified to include: leadership, motivation, and organizational development discussions by the Business and Education Director; resident presentations on practice management projects, a series of four one-hour sessions conducted by representatives of banking, law, accounting, and insurance respectively; and a day-long seminar entitled "Establishing and Managing the Office Practice," using management consultants and medical office supervisors. The Business and Education Director plans and moderates all sessions. The success of this program may be gauged by the receptivity shown by house officers and attending physicians in other specialties. Preparation for the management and financial aspects of office practice is seldom available for residents in "traditional" specialties, yet near the conclusion of their hospital training many of them have expressed a genuine need for learning managerial concepts and applications.

*Audio/video taping of resident/paramedical staff interactions* was and remains a sensitive issue. Initially, the paramedical staff saw this as an evaluation of *their* performance. Paranoia developed, which was fueled by insecure employees. Residents were not convinced that this application of audio/video taping was valuable. However, after several months of trial use

and a few conferences presenting the tapes and discussing "management of time" and "utilization of office staff," residents became appreciative of the value of viewing the doctor/nurse interaction. Paramedical staff still have mixed feelings, but receptivity is considerably higher. Possible reasons for increased acceptability are: inclusion of office staff in sessions using video tape, residents' positive comments about educational benefits, utilization of office supervisor as "buffer" to explain use of audio/video equipment, and defusing the rumor that performance was being evaluated by audio/video monitoring.

*Applied research and independent study* have always been considered important, but because of the hectic residency schedule there was seldom time. However, when a 12-month curriculum was developed for the third year which detailed office hours, inpatient rounds, elective time and conferences, there *appeared* a segment of time available for self-study. During the RBM experience, there are several hours per week for research. In addition, a part-time (15 to 20 hours/week) research assistant is employed to work with residents on chart audits, tabulations, mailings, and other time-consuming phases of the research. Computerized data has also added a time-saving aid. The most significant practice management research projects which have been completed are: (1) compilation of data on community and medical resources for cities under 50,000 in the state of Ohio, including hospital facilities, medical and community resources, and information about the social, educational, and living conditions; (2) time study for physician and nursing procedures, such as pelvic exams, Pap smears, injections, counseling, well-baby exams, prenatal visits, chronic-problem office visits, and minor surgery; (3) criteria for evaluating a community as a desirable practice location; (4) physicians' knowledge and attitudes regarding the hypertensive patient and the impact of doctor-patient relationship on this disease; (5) effect of flow sheets and patient education on the compliance of patients with the chronic problems of diabetes mellitus, hypertension, congestive heart failure, and chronic obstructive pulmonary disease; and (6) correlation of score on Cornell Medical Index-Health Questionnaire to office

visits by age, sex, and problem. The Business and Education Director supervises the research project from the earliest stages to the report writing. Residents are encouraged to select their topics as they begin their third year.

Each family practice resident is provided a computerized *practice profile* summarized in Figure 1. Effective patient management requires sound execution of managerial skills. Quantitative analysis of financial, diagnostic, and demographic data will provide a sound knowledge base for decision making. Financial analysis will be helpful for forecasting cash flow, budgets, personnel, equipment, and supplies. Diagnostic information will help determine continuing education emphasis, health trends, medication and medical procedures, nursing support, and scheduling. Demographic statistics will provide insight into the patient population and may help determine present and future health-care needs of the practice and community.

Seven graduates currently in practice voiced unanimous support of the Resident Business Manager program and the seminar program. Two graduates did not respond to the survey. The graduates were also appreciative of the opportunity to visit practicing physicians to observe their office systems. When asked to comment on the "most important" elements of practice management applicable to eventual practice, they enumerated three major areas: (1) mechanics of establishing and maintaining an office — personnel, finances, and routines; (2) personal business consultations — insurance, taxes, and finances; and (3) managerial and administrative skills. The current five senior residents were also surveyed, and their evaluations of the practice management curriculum were similar to those of the graduates. The major criticisms by both graduates and residents were that more educational emphasis should be given to practical office problems and their solutions, with increased "hands on" experience and supervision.

### **Educational Objectives**

The young physician embarking on a career in private practice often finds himself with adequate training in diagnostic and therapeutic areas and with minimal training in management of business and financial affairs.<sup>5</sup>

Figure 1. Practice Profile

FINANCIAL ANALYSIS				DIAGNOSTIC ANALYSIS			
Charges	Monthly	Year to Date	Major Category	Quarterly	Year to Date		
I. Professional Services Initial office visit Nurse visit Routine office visit Extended office visit Physical exams			Prophylactic Cardiac, vascular Respiratory Allergic, endo, metabolic Mental Genito-urinary Signs, symptoms Disorder — bone and joint Digestive Nervous system Skin, cellular Accidents Infectious disease Other				
II. OB-GYN Pelvic exam Prenatal care Post partum exam							
III. Office Procedures ECG Sigmoidoscopy Eye exam Hearing test Cryosurgery							
IV. Inj. & Immunization							
V. Laboratory Urine Pregnancy test Pap smear Glucose Hematocrit Throat culture			Major Diagnosis				
VI. Hospital Care Admission work-up Routine care			1. Hypertension 2. Other symptoms 3. URI 4. Anxiety 5. Pelvic exam 6. Depression 7. Pap smear 8. Well-child exam 9. Diabetes mellitus 10. Obesity 11. Congestive heart failure 12. Physical, special 13. Bronchitis 14. Cystitis 15. Emphysema 16. Family relations				
VII. Other Counseling	_____	_____					
<b>Total charges</b>			<b>Sub-total</b>				
<b>Payments</b> Insurance Cash payment Money order Personal check Attorney payment							
<b>Total payments</b>	_____	_____					
Collection ratio = \$ payments/\$ charges							
DEMOGRAPHIC ANALYSIS							
Sex	Month	Year to Date	Marital Status	Month	Year to Date		
Male			Single				
Female	_____	_____	Married				
<b>Totals</b>			Separated/divorced				
			Widowed	_____	_____		
<b>Age—</b>			<b>Totals</b>				
0-12 yrs			<b>Family Care</b>				
13-19 yrs			Entire family				
20-39 yrs			Part of family				
40-60 yrs			Individual only	_____	_____		
61 yrs & over	_____	_____	<b>Totals</b>				
<b>Totals</b>							
			<b>Census</b>				
			Rural				
			Suburban				
			Urban				
			Inner City				

Practice management education must fill the void in a medical training program by developing the physician's competence in business principles of finance and personnel supervision, office procedures and routines, organizational and leadership skills, and utilization of time and resources.

There are six performance criteria which may indicate residents' competency. First, interpreting financial data — accounts payable, receivables, expenses, cash flow, and budgets. Second, implementing efficient office routines — appointment scheduling, patient flow, delegating nursing responsibilities, and financial accounting and reporting. Third, understanding and employing personnel policies — recruiting, selecting, training, supervising, and evaluating paramedical staff. Fourth, analyzing practice organizations — solo, partnership, group, corporation, health maintenance organization. Fifth, assessing legal and financial resources — legal, banking, insurance, accounting, tax, and management consultants. Sixth, developing and maintaining effective patient records and diagnostic data as tools for patient care, research, and continuing education.

An outline of practice management knowledge, skills, and attitudes is included in Figure 2. The efforts by the Department of Family Medicine at the University of Washington<sup>6</sup> to formalize educational objectives into knowledge, skills, and attitudes provide a sound conceptual model for faculty and residents.

## Methods

Practice management education methods must be as varied as the breadth of the topic. Training must be flexible to allow for individual determination, yet structured to fulfill the competency objectives and performance expectations. Lectures or isolated encounters with practice management topics will most probably fall short of desired goals.

As previously mentioned, there are five distinct areas of education at the Family Practice Center of Akron to enhance the residents' growth in practice management knowledge, skills, and attitudes. It is useful to briefly discuss the purpose, learning objectives, and methods by which each of

the five are employed.

### *Resident Business Manager (RBM)*

The Resident Business Manager program is a two-month experience in the third year of the residency. The purpose of this program is to provide an intense and stimulating experience in day-to-day affairs of an office practice. If we wish to affect behavior, we must get residents involved. They cannot be merely observers; they must be participants.<sup>8</sup>

*Learning objectives* for this two-month experience are: (1) understanding of financial procedures — daily cash receipts and charges, insurance form preparation, billing and collection, accounts payable and budgeting; (2) exposure to personnel management through direct involvement in interviewing, selecting, training, supervising, and evaluating paramedical staff; (3) implementation, evaluation and modification of nursing and office routines; and (4) opportunities to assess a variety of medical practices and organizational models.

During these two months, the Resident Business Manager spends about four hours weekly with the insurance and billing staff and the same length of time with receptionists during nightly cash out. Other scheduled commitments include the weekly supervisor's meeting attended by the directors and paramedical supervisor, and co-moderating the monthly staff meeting attended by all medical and paramedical personnel. Attendance at practice business meetings can give invaluable insight into finance, personnel policies, decision making, and the management of change.<sup>9</sup>

The paramedical supervisor is very active in the RBM's education and provides feedback regarding the resident's progress. Specific learning components which the supervisor can provide include assessing personnel performance, daily efficiency of physicians and staff, and utilization of staff in effective patient flow. The RBM is encouraged to spend several hours weekly with the supervisor to perform and assist jointly in some of the office functions as well as prepare for weekly and monthly meetings. The supervisor normally acts as a liaison between the RBM and other staff so that time is efficiently used to mesh both resident education and office productivity.

The RBM is usually very active in staff education and training. There is more time during these two months to become familiar with each employee's tasks and determine how the physician can effectively relate to the individuals in their respective functions. The staff also develops more understanding of the resident-physician's needs.

The RBM is encouraged to visit several private practitioners' offices, especially those which may be similar to his/her future practice preferences. The visit is intended to acquaint the resident with office management routines and practices as well as "medical" features. Time is usually spent with the practitioner's office manager/supervisor and paramedical staff. When time and distance permit, there may be opportunities to visit locations which may be potential practice opportunities.

The advisor for the RBM is the Business and Education Director of the residency. Since all senior residents rotate as RBM, this faculty responsibility is ongoing throughout the year. Several responsibilities are delegated to the paramedical supervisor and the faculty role is now one of planning, coordination, and evaluation.

### *Applied Research*

The third-year curriculum has been structured to encourage residents to conduct "self-directed" educational projects. Practice management lends itself to this method of learning because of the accessibility of data in the practice model and the variety of research topics available for individual preferences. Dr. Irvine Page in his book entitled *Speaking to the Doctor* states:

... The growing schism between research workers and practitioners worries me, but it should not be exaggerated. This state of affairs can only represent misbehavior on both sides because, surely, there is no reasonable basis for a split... The real difference between practice and research is quantitative, not qualitative...<sup>10</sup>

*Learning objectives* include: (1) formulation of the research question and relevant hypotheses, (2) use of surveys and data gathering instruments, (3) sampling and statistical techniques, (4) analysis of results and formulation of conclusions, and (5) research reporting — publication and presentation.

Figure 2. Educational Objectives for Practice Management

**A. Knowledge**

The resident shall demonstrate a working knowledge of:

1. Organizational development:<sup>7</sup>
  - a. Behavioral Science applied to groups
  - b. Personal, interpersonal and group interventions
  - c. Team building
  - d. Action research
2. Leadership, motivation theory, and group process
  - a. Task and relationship leadership styles
  - b. Maslow and Herzberg's motivation theories
  - c. Group building and maintenance procedures
3. Work routines and responsibilities to maintain a medical practice:
  - a. Nursing
  - b. Receptionist
  - c. Secretarial
  - d. Insurance
  - e. Billing and collections
  - f. Accounts payable
  - g. Purchasing equipment
  - h. Ordering supplies
  - i. Laboratory and medical procedures
4. Personnel functions:
  - a. Recruiting and hiring
  - b. Training and supervising
  - c. Performance appraisal
  - d. Compensation
  - e. Termination and turnover
5. Organizational structures:
  - a. Solo
  - b. Partnerships
  - c. Corporations
  - d. Multi-specialty groups
  - e. Health maintenance organizations
6. Criteria for selection of practice location:
  - a. Community health-care needs
  - b. Hospital facilities
  - c. Physicians
  - d. Personal and family needs
  - e. Support services available
7. Initial procedures necessary for establishing a medical practice:
  - a. Financial planning
  - b. Budgeting
  - c. Credit and loans
  - d. Selecting practice site
  - e. Equipping office and laboratory
  - f. Accounting and legal advice
  - g. Legal and contractual obligations
  - h. Personnel management policies
  - i. Scheduling and telephone procedures
  - j. Fee structure
  - k. Patient records
  - l. Bookkeeping system
8. Business and legal support functions:
  - a. Law
  - b. Accounting
  - c. Tax
  - d. Insurance
  - e. Banking

9. Computerized systems

- a. Financial productivity
- b. Patient encounters
- c. Diagnostic analysis
- d. Demographic analysis

**B. Skills**

The resident shall demonstrate the ability to:

1. Manage and supervise human resources, especially as they relate to office affairs and patient management.
2. Plan and implement personal and professional financial management functions.
3. Establish and maintain priorities and effective utilization of time in relation to medical, administrative, and education responsibilities.
4. Conduct small and large group meetings to present and discuss business affairs and other educational programs.
5. Organize work and job routines for self and subordinates.
6. Research management subjects and problems which will be applicable for eventual practice situations.
7. Select and converse with appropriate consultants for business and legal questions.
8. Evaluate and choose a practice setting which will satisfy as many personal, family, and professional needs as is reasonably possible.
9. Develop a data system which will provide both effective and efficient patient management.

**C. Attitudes**

The resident shall demonstrate an awareness of and ability to:

1. Adhere to and cooperate with the execution of office procedures and personnel policies.
2. Learn and comprehend practice management principles and prepare to apply and supervise their use in actual practice.
3. Appreciate the significance of business and management acumen as an aid to professional growth.
4. Accept the responsibilities of leader and manager of the non-medical features of office practice.
5. Devote appropriate time and effort to learning the managerial and supervisory functions.
6. Utilize sound judgments in choosing a location for eventual practice.
7. Appreciate the need for and willingness to indulge in research into both medical and non-medical problems which present themselves in office practice.

There are three general subjects which lend themselves to investigation and analysis. These are practice preparation, office management, and patient management. Specific topics a resident could address in practice preparation are evaluating desirable aspects of a community, assessing the essentials for a community hospital, analyzing a variety of practice organizations, comparing the advantages and disadvantages of incorporation, or determining community resources needed to support family medicine. The topic of office management may be studied from several vantage points, such as establishing an efficient appointment schedule, surveying patient satisfaction regarding nursing, medical, and financial features, time efficiency for office procedures (tests, examinations, etc), cost effectiveness for laboratory and diagnostic equipment, using computer for financial and diagnostic analysis, or office layout and design to effect quality health care. The subject of patient management can be studied by evaluating the use of screening instruments such as the Cornell Medical Index-Health Questionnaire and Health Hazard Appraisal, developing and evaluating chronic-problem flow sheets in relation to patient compliance, constructing patient education materials and observing their practical application, establishing systematized routines for frequent and common problem encounters and studying their effects on office efficiency, or evaluating the use of the "team" approach in patient care.

The Business and Education Director has responsibility for directing and coordinating the research projects by meeting regularly with all senior residents as well as working with them individually.

#### *Audio/Video Taping and Review*

In the physician's approach to management, it is essential that he/she keep an open and inquiring mind, remain sensitive to what is happening, and preserve empathy with colleagues, staff, and patients.<sup>11</sup> This awareness of sensitivity may be facilitated by taping residents in the multitude of personal and group encounters which are part of office management responsibilities. The *purpose* of this educational technique is to enhance the resident's "insight into personal man-

nerisms and styles" regarding time utilization and interpersonal relationships. The use of audio and audio/video taping is a dynamic tool and discretion and preparation are necessary. Objectives and routines should be defined clearly for the educational applications of audio/video taping.

*Learning objectives* to be considered are: (1) efficiency in the doctor-patient encounter, (2) development of an effective doctor-nurse routine, (3) understanding of the role of paramedical staff with patients and physicians, and (4) management of time in the office setting.

Review sessions are usually one to two hours with one or more faculty members. If a physician and behavioral scientist can both be available, the critique may focus upon a broader range of practice skills. The format of these sessions proceeds as follows: discussion of resident's objectives (what interaction or behavior to observe); candidly assess both strengths and deficiencies as related to objectives; have resident initiate critiquing (What do you see? What might you do differently?); summarize the session; encourage resident to highlight what he/she was satisfied with; formulate plan for subsequent reviews; and provide immediate feedback, preferably in written form, highlighting critique comments and areas of progress noted.

Audio taping of patient phone messages, receptionist-patient interaction, and the nurse-receptionist encounters expand the resident's knowledge of the overall practice. These occurrences are not normally available for physicians to observe firsthand, yet these interactions have significant impact and effect on a medical practice. This information will often provide feedback regarding the impact of physicians' actions upon the delivery of efficient patient care.

Audio/video taping and playback of interviewing encounters, practice management interactions, and residents' presentations provide feedback from a variety of communication and interpersonal situations.

#### *Organizational Development*

The office practitioner will have responsibility for organizing, supervising, and motivating groups. *The*

*quality of the overall health care provided is related to organizational and leadership abilities as well as medical competence.* Successful leadership in the medical practice will be measured by the cohesion, synergy, and sensitivity of the entire organization.

There are several contemporary psychologists and behaviorists who have research applications of behavioral science in organizations. Their writings and theories are worthy of integration into human relations training. The authors whose concepts are particularly applicable for practice management education include Maslow<sup>12</sup> *Hierarchy of Needs*, Argyris<sup>13</sup> *Organization Models*, Likert<sup>14</sup> *Supervision and Group Productivity*, Herzberg<sup>15</sup> *Motivation and Job Enrichment*, and Blake<sup>16</sup> *Managerial Grid*.

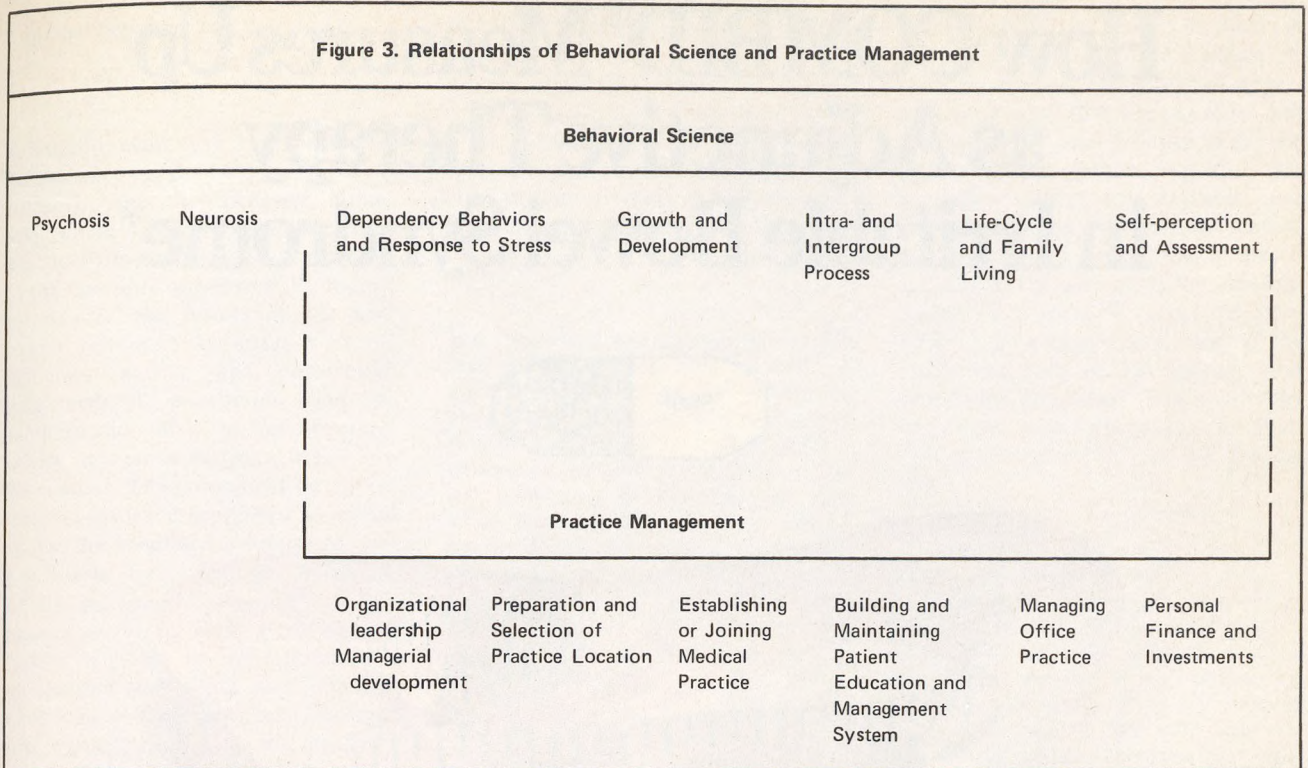
*Learning objectives* to be achieved by the presentation and discussion of organizational development concepts and applications are: (1) developing and expanding leadership qualities, (2) understanding group process and dynamics, (3) awareness and utilization of flexible approaches for managing people, (4) application of motivation and job enrichment concepts, (5) understanding organizational structure and supervision, and (6) developing skills in evaluating performance and giving constructive feedback.

This integration of organizational development into practice management educational methods can be accomplished through conferences, seminars, group discussions, and independent readings. Emphasis should be upon both theory and its application to medical practice. Some modifications and adaptations may be necessary because of the ever-changing nature of medical organizations.

#### *Business Consultants*

Practice management education should provide young physicians with exposure to business and legal professionals such as lawyers, accountants, insurance representatives, and bankers. The competence with which the young physician deals with monetary considerations involved in medical practice has much to do with not only success and personal enjoyment, but also the satisfactory adjustment of his personal and family life.<sup>17</sup> The ultimate goal for this educational expo-

Figure 3. Relationships of Behavioral Science and Practice Management



sure is to develop and refine physicians' "managerial acumen."

Consultants will be important during all phases of business management: (1) entry into an established or developing practice, (2) expansion and growth of an existing practice, and (3) termination of contracts and obligations. The business specialists called upon to educate or assist the physician should have demonstrated expertise in advising physicians in business and legal affairs.

The *learning objectives* which business consultants could provide input are: (1) legal — medical ethics, contracts, physician as a witness, wills, and trust funds; (2) accounting — billing and payment systems, financial reporting, tax liabilities, budgeting and expense management and incorporation; (3) insurance — malpractice, personal and professional coverage, third-party payers; and (4) banking — estate planning, credit and loans, financial planning, and investments.

A practice management seminar program of several sessions conducted yearly, preferably in late winter or early spring, could accomplish many of the stated objectives. Participants in these seminars should include representation from business organizations, medical management consul-

tants, and physicians willing to share their experiences of "problems" and "solutions" in office practice.

### Behavioral Perspective of Practice Management

The need for and implementation of practice management education has been reviewed in some detail. A final yet equally important thought is the consideration of integrating practice management into the behavioral science curriculum for resident physicians. When the full range of behavioral science is delineated and practice management is viewed in its broadest context, the commonality is vivid (Figure 3).

Practice management education is more than a lecture series by business or being "office manager for a month." The concepts and applications are an integral element of the entire curriculum. Both medical and behavioral science faculty administrate and implement this training. The success of this educational endeavor will accrue in the form of efficient patient care, humanistic and economical office practice, and satisfactory personal and professional development.

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hospital for eight days. One week after her release from the hospital, she went to Mayo Clinic in Rochester, Minnesota, where diagnosis showed a 50-55 percent permanent loss of hearing due to the failure of the hospital's doctors to monitor the results of the test. Expert testimony indicated that the minimum waiting and observation time medically acceptable after the administration of a test for hypersensitivity to tetanus antitoxin was 15 to 20 minutes. The court held on appeal that the evidence supported an award against the hospital for failure to wait a sufficient time after the hypersensitivity test before administering the tetanus antitoxin. Despite strong and specific language in the opinion that the doctors should not have administered the tetanus antitoxin without first waiting to discover the results of the hypersensitivity tests, the court still based its affirmance on a general negligence standard.

Quintal v Laurel Grove Hospital<sup>96</sup> applied *res ipsa loquitur* to the failure of the physician-defendants to properly care for the patient — a six-year-old boy — who developed cardiac arrest on the operating table because of insufficient oxygen administered by the anesthesiologist. Severe brain damage resulted, and the plaintiff became a quadriplegic.

The courts have recognized a physician's duty to use reasonable efforts to determine if a reaction or interaction is likely, while administering a drug to a patient. In Winstead v Hildenbrand,<sup>97</sup> the appellant, suffering from syphilis, was admitted to the Georgetown University Hospital Night Clinic. Over a two-month period, he received several injections of tryparsimide, an arsenical specific used in the treatment of cerebrospinal syphilis. The appellant was referred to the appellee, who continued the administrations without conducting a neurological examination, or taking a medical history; the appellee relied instead on the examinations conducted at Georgetown Hospital. The evidence further shows that the appellee never examined the patient's eyes, except to "look at them." Expert testimony indicated that the use of tryparsimide over a long term,

without concurrent observation and periodic neurologic examinations, constituted actionable negligence.

Finally, the courts have recognized a duty to observe the patient after administering a potentially dangerous drug, so that reactions and interactions can be dealt with before their effects worsen.<sup>98</sup>

It is certain that once the manufacturer of a drug has satisfied his duty to warn the physician of all reported side effects, the physician will have some duty to warn the patient of such effects . . . (After administration) the physician should watch out for, and follow up, all symptoms and signs which might indicate an adverse reaction and he should stop treatment of the drug when such symptoms appear, unless there is some overriding consideration. *If laboratory tests should be made to discover a beginning adverse reaction, he must make them.*<sup>99</sup> (Emphasis added.)

Surprisingly, research indicates that the unavailability of the physician may preclude his liability. In Ferguson v Court of Cook County,<sup>100</sup> a patient who alleged that terramycin resulted in paralysis of one leg and the right vocal cord, back pain and nausea, could not recover from a physician whom she tried to reach at the time of the alleged reaction, but could not locate.

E. *The Physician's Duty to Use the Least Dangerous Drug.* A few courts and legal authorities have imposed a duty on the physician<sup>101</sup> to balance the risks of taking a drug against its anticipated benefit to the patient. Compared to the strong opinion of the medical profession<sup>102</sup> regarding the duty of the physician to use the least dangerous drug, the admonition of the courts is weak.

Part Three illustrates that the courts have used a generalized standard of care to hold physicians liable for failing to anticipate and control drug reactions and interactions. The specific acts of negligence upon which liability has been predicated include: the failure to take a history and to ask specific, pointed questions about past drug reactions;<sup>103</sup> the failure to test for hypersensitivity;<sup>104</sup> the failure to warn of potential reactions and interactions;<sup>105</sup> the failure to respect a patient's statements indicating hyper-

sensitivity;<sup>106</sup> the failure to detain a patient in the physician's office or clinic to discover the results of hypersensitivity tests that the physician has conducted;<sup>107</sup> and the duty to use the less potentially reactive drug when two alternative drugs are available and equally effective.<sup>108</sup> With the exception of cases involving the informed consent of the patient to the administration of a drug,<sup>109</sup> a general standard of care, requiring the use of the "skill and care of an ordinary and reasonable physician," was applied by the courts to the physician's conduct. *Pike v Honsinger*<sup>110</sup> is the leading case.

*Upon consenting to treat a patient, it becomes his (the physician's) duty to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed . . . The rule in relation to learning and skill does not require the surgeon to possess that extraordinary learning and skill which belong to only a few men of rare endowments, but such as is possessed by the average member of the profession in good standing . . . a departure from approved methods in general use, if it injures the patient, will render him liable, however good his intentions may have been . . . to render a physician liable, there must be a want of ordinary and reasonable care, leading to a bad result.*<sup>111</sup> (Emphasis added.)

Because the conduct of reasonable physicians is controlling under the *Pike* test, the plaintiff must rely upon the testimony of other physicians to substantiate a dereliction of duty by the defendant-physician, unless *res ipsa loquitur* is applicable.<sup>112</sup>

Part Four discusses the role of expert testimony in drug reaction claims, and advances a theory that places lawsuits involving drug reactions and interactions in the mainstream of a trend toward the extraction of *specific duties* from the *Pike v Honsinger* duty of care. Similar to allegations of *res ipsa loquitur*, claims of specific duty do not require expert testimony as a condition precedent to the establishment of a *prima facie* case.

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#### IV. Reconciling the Specific Procedures Advocated by the Medical Profession with the General Standards Enforced by Law

##### *Extracting Specific Duties to Control and Anticipate Drug Reactions and Interactions From the General Duty of Care*

This article has so far presented a review and analysis of a physician's liability for death or injury resulting from reactions and interactions precipitated by the intentional administration of drugs to a patient. Part Two discussed the medical advances in the control and anticipation of drug reactions and interactions. Part Three reviewed the gamut of physicians' liability for failing to competently anticipate and control drug interactions. It is important to note the difference in the degree of specificity between the highly particularized directives of the medical profession and the general, "reasonable care" approach still applied by the courts.

Despite the development of "specific duties" by the medical profession to anticipate and control drug reactions and interactions, the law has lagged far behind, still woodenly applying the generalized Pike v Hon-singer rule to cases involving drug reactions and interactions. The courts, however, have not been so sluggish in other areas of the physician-patient relationship. Rheingold and Davey, in their perceptive analysis of the standard of care in medical malpractice cases,<sup>113</sup> identify a trend in medical jurisprudence toward the extraction of "specific duties" from the general Pike test.

The standard of care which a medical practitioner owes a patient is a little examined area of medical malpractice law. The primary reasons for greater attention to facts and proof than to the legal duty of the physician is that the standard of care is so broad and general in nature. In many respects it is as broad as the duty of care owed by a possessor of property or the

operator of a vehicle. *What is often overlooked in an examination of malpractice standards is that over the years a certain number of specific obligations have been extracted from the general duty of care.*<sup>114</sup> (Emphasis added.)

"Specific duties," the result of the repeated adjudication of certain factual patterns of malpractice claims under the Pike rule, allow the unexcused non-performance of a specific act to constitute evidence of a physician's dereliction of duty, notwithstanding that the plaintiff has not produced expert testimony to establish the negligence of the defendant-physician.

The specific duty approach advocated by Rheingold and Davey clearly departs from the long accepted "expert testimony" rule that required the plaintiff under the Pike rule to produce expert testimony at trial that a duty of care existed between physician and patient and that the physician was derelict in his performance of the duty.<sup>115</sup> *Res ipsa loquitur* provides a more traditional exception to the expert testimony rule and is supported by a rationale applicable to the specific duty approach. Simply stated, *res ipsa loquitur* allows the plaintiff to establish a prima facie case, thus avoiding non-suit, by sustaining an inference that the available evidence of negligence points more forcefully to the defendant than to anyone else.<sup>116</sup> Clamps and sponges are not indigenous to the normal human body, and their presence after an operation gives rise to the inference that someone was negligent.<sup>117</sup> The application of *res ipsa loquitur* requires the satisfaction of three elements: first, the event must be one that normally does not occur without negligence; second, it must not have been due to any voluntary action on the part of the plaintiff; and third, the event must be caused by an instrumentality within the "exclusive control" of the defendant.<sup>118</sup>

Courts in malpractice actions have been remarkably receptive to the application of *res ipsa loquitur* to establish dereliction of duty, because the probative evidence of negligence is usually far more accessible to the physician than to the plaintiff.<sup>119</sup> *Res ipsa loquitur* tends to "smoke out"

evidence otherwise unavailable to the court and the plaintiff in the absence of expert testimony.

*Res ipsa loquitur* diminishes the reliance of the courts on the medical profession to establish the standard of care applicable in medical malpractice actions. In the words of Rheingold and Davey, *res ipsa loquitur*, as well as "specific duties," represents a trend toward the use of "external standards"<sup>120</sup> that minimize the dependence of the courts on the willingness of physicians to testify against their colleagues.

Like *res ipsa loquitur*, "specific duties" militate in favor of "external standards" of proof. The courts have already deemed as "specific duties" the following accoutrements of the physician-patient relationship:

- a. the duty to warn of adverse effects of medical treatment and to obtain "informed consent" to the proposed treatment or medications;<sup>121</sup>
- b. the duty to instruct the patient as to what he should do to facilitate his recovery (for example, to stop using a certain medication if a certain side effect develops);
- c. the duty to refer to an appropriate specialist when the attending physician realizes that a particular problem is beyond his expertise; and
- d. the duty to keep abreast of scientific advances (for example, to know and observe the side effects of the drugs he prescribes).<sup>122</sup>

This writer believes that certain medical practices recognized by both the medical profession and the courts to control and anticipate drug reactions and interactions, may properly become "specific duties," thus obviating expert testimony to establish dereliction of duty in these cases. The medical profession has recognized that the control and anticipation of drug reactions calls for specific procedures on the part of the physician. These procedures include:

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- a. the duty to take a complete medical history and to inquire about past reactions or interactions;<sup>123</sup>
- b. the duty to warn the patient of potential harm from the prescribed drug;
- c. the duty to conduct hypersensitivity tests before administering certain drugs (eg, penicillin);
- d. the duty to observe the patient after a test is administered to determine the patient's reaction to a certain drug;
- e. the duty to use the less dangerous drug, if equally effective;<sup>124</sup> and
- f. the duty to keep records of all past administrations and the patient's reaction to them.

For example, if a physician once administered penicillin to a patient and the patient developed anaphylactic shock, the physician should be under a "specific duty" not to administer penicillin again. If he does, and the patient incurs the same reaction, the patient should not be required to establish by expert testimony that the administration constituted a breach of the Pike standard.

The courts have already proclaimed as a "specific duty" the physician's duty to inform the patient of adverse effects of treatment with radioactive elements. In *Natanson v Kline*,<sup>125</sup> the plaintiff, who suffered from cancer of the breast, underwent a radical mastectomy. The plaintiff then engaged the defendant-physician to administer cobalt radiation therapy to the site of the mastectomy and the surrounding areas. The defendant did not inform the plaintiff of the incidental discomfort and danger of cobalt irradiation. The Kansas Supreme Court held that the physician's failure to provide the information requisite to an "informed consent" rendered the physician liable for any harm the patient incurred, regardless of how expertly the cobalt was administered. The court invoked, in effect, a doctrine of absolute liability.

In *Kerr v Bock*,<sup>126</sup> the plaintiff underwent a biopsy to determine the malignancy of a tumor disclosed by x-rays of her left femur. The biopsy, performed by the defendant, involved the removal of a section of bone from the femur. Neither an internal fixation device (eg, plate), nor an external

plaster cast, was provided for support of the debilitated leg. The plaintiff was instructed "to be careful" and not to put much weight on the leg.<sup>127</sup> Seven days after the biopsy, the plaintiff attempted to lift the leg while she was lying on the floor. The femur fractured at the sight of the bone removal. In the ensuing malpractice action, judgment was entered on the jury verdict for the defendant. The Supreme Court of California reversed, holding that where a portion of the femur has been removed and the leg is left unsupported, a lay Juror's common knowledge forms a sufficient basis for the presumption, arising from the breaking of the bone at the point of bone removal, that the surgeon's failure to warn his patient against lifting her leg was the negligent cause of the fracture. *Kerr v Bock* thus examines the failure of the physician to give specific postoperative precautionary instructions, and allows the jury, through *res ipsa loquitur*, to find negligence arising from that failure to warn. Other cases hold a physician liable for failure to warn his patient against the risks of engaging in a particular physical activity.<sup>128</sup>

Despite the apparent suitability of the "specific duty" approach to many of the causes of action that arise in connection with drug reactions and interactions, the courts have been sluggish to depart from the general negligence standard of *Pike v Honsinger*. Based upon the review of the treatment of drug reactions and interactions by the courts and the medical profession, the expansion of the specific duty approach to include certain facets of the treatment of patients is in the interest of our national health care policy. The policing of the medical profession will be more effective, and the reliance on expert testimony will be diminished. Pronouncing as "specific duties" many of the tasks that the physician has been held negligent for not performing (eg, taking history, asking questions about previous adverse reactions) under the Pike test will diminish the dependence of the courts on the medical profession to set the standard of care and determine dereliction of duty in medical malpractice cases involving drug reactions and interactions and, consequently, will perpetuate the trend toward the "external standards" in medical mal-

practice suits identified by Rheingold and Davey. Perhaps more importantly, however, it will add a quasi-statutory specificity and consistency to the control and anticipation of drug reactions and interactions. The firm recommendations of important medical authorities regarding the proper procedures to avert drug reactions discussed in Part Two will receive the force of the law. It is inevitable that such a development will improve the quality of health care in America.

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