

## Integrating human resources and program-planning strategies

JOE E. SMITH

**Abstract:** The integration of human resources management (HRM) strategies with long-term program-planning strategies in hospital pharmacy departments is described.

HRM is a behaviorally based, comprehensive strategy for the effective management and use of people that seeks to achieve coordination and integration with overall planning strategies and other managerial functions. It encompasses forecasting of staffing requirements; determining work-related factors that are strong "motivators" and thus contribute to employee productivity and job satisfaction; conducting a departmental personnel and skills inventory; employee career planning and development, including training and education programs; strategies for promotion and succession, including routes of advancement that provide alternatives to the managerial route; and recruitment and selection of new personnel to meet changing departmental needs. Increased competitiveness among hospitals and a shortage of pharmacists make it imperative that hospital pharma-

cy managers create strategies to attract, develop, and retain the right individuals to enable the department—and the hospital as a whole—to grow and change in response to the changing health-care environment in the United States. Pharmacy managers would be greatly aided in this mission by the establishment of a well-defined, national strategic plan for pharmacy programs and services that includes an analysis of what education and training are necessary for their successful accomplishment.

Creation of links between overall program objectives and people-planning strategies will aid hospital pharmacy departments in maximizing the long-term effectiveness of their practice.

**Index terms:** Administration; Administrators; Careers; Education, pharmaceutical; Health care; Job satisfaction; Manpower; Personnel, pharmacy; Pharmaceutical services; Pharmacy, institutional, hospital

*Am J Hosp Pharm.* 1989; 46:1153-61

A new phrase has recently crept into hospital pharmacy management jargon: human resources management (HRM). It first appeared in the general management literature in the 1950s. At that time management was adopting some new philosophies from behavioral scientists such as McClellan, McGregor, Blake, Mouton, Herzberg, and Argyris. The work of all of these scientists focused on the people side of organizations. It covered such wide-ranging subjects as achievement motivation, styles of management, relationships between production and people, motivation to work, and human dynamics growth in organizations.

As managers learned of these new areas, and as more data were accumulated by the scientists themselves or by a few venturesome personnel and line-operating managers, the people side of organization life drew more attention.

This whole field was quickly seen by discerning personnel-department managers as exciting, important, and complex. To adequately manage according to the HRM principles suggested by the scientists would require a new focus and a new field of organization practitioners. Personnel people accepted this challenge, and in the early 1980s many personnel departments changed their names to human resource management departments to reflect this change in direction.

Although organizations need a staff department to keep attention focused on the principles of HRM, they have an even more compelling need for line managers to embody and apply these principles. Line managers in hospitals, including some of those in hospital pharmacy, are beginning to understand, accept, and apply the essential tenets of the concept.

JOE E. SMITH, PHARM.D., is Director, Department of Pharmacy, Thomas Jefferson University Hospital, Eleventh and Walnut Streets, Philadelphia, PA 19107.

Presented October 25, 1988, in connection with Dr. Smith's designation as the fourth John W. Webb Visiting Professor in Hospital Pharmacy by the College of Pharmacy and Allied Health Professions, Northeastern University, Boston, MA.

The assistance of Patricia A. Chase, M.S., in the collection of information for this paper is acknowledged.

See page 1162 for a related paper on this topic.

Copyright © 1989, American Society of Hospital Pharmacists, Inc. All rights reserved. 0002-9289/89/0601-1153\$02.25.

The John W. Webb Visiting Professorship in Hospital Pharmacy was established in 1985 at the College of Pharmacy and Allied Health Professions at Northeastern University, Boston, Massachusetts. Webb was Director of Pharmacy at Massachusetts General Hospital from 1959 until his retirement in 1983. After receiving Bachelor of Science and Master of Science degrees from the Massachusetts College of Pharmacy in 1949 and 1951, respectively, Webb was Director of Pharmacy at Hartford Hospital and worked at the University of Connecticut before returning to Massachusetts General Hospital in 1956 to become Assistant Director of Pharmacy. Webb also served as director of the graduate program in hospital pharmacy at Northeastern from its inception in 1964 until his retirement. He is the author of numerous contributions to the pharmacy literature.

A hospital pharmacy practitioner is appointed to the visiting professorship each year by the dean of the college in recognition of his or her commitment to hospital pharmacy management, experience as a practitioner and educator, and dedication to publishing management-related articles. The visiting professor presents a lecture on excellence in management to hospital pharmacy practitioners and students in the graduate program.

### Definition of Human Resources Management

As with all new movements, many definitions and action strategies exist for HRM. Although no single definition would find universal acceptance, I will offer this generic one: human resources management is that area of organization life that focuses on the effective management and use of people.<sup>1</sup>

This definition extends far beyond the historical management concept of providing adequate pay, benefits, performance appraisal, and other treatment. It encompasses effective approaches to such concerns as human resources planning, forecasting manpower requirements, employee career planning and development (including technical training), succession and development of managers, interpersonal relationships, attention to employees' personal goals, and participative management styles.

Although HRM is closely related to personnel management, it goes beyond this area because it seeks to achieve coordination and integration with overall planning and other managerial functions. HRM is a more comprehensive approach to the management of people at work.

With a base in the behavioral sciences, the field of HRM is concerned about the motivation and development of the individual employee and the performance and productivity of the organization. Another major factor differentiating HRM from personnel is HRM's special contribution to the or-

ganization's strategic planning.

### Changes in Health-Care Environment

Dramatic changes have taken place in the health care environment, making it imperative that hospital pharmacy managers devote more attention to the human side of management. Some relate to changes in the nature of the work force generally; others relate to changes in the health-care industry; and some involve changes in the pharmacy profession itself.

**Work Culture and Work Force.** Beginning in the late 1950s and throughout the 1960s, our work culture underwent a decided shift. At that time we began to see more questioning of authority and challenging of the business "system." Workers became more outspoken and less willing to have their work lives structured in such a way that they thought they had no control. Sociologists tell us that this resulted from a combination of economic, sociological, and political events of that period, a few of which had substantial impact on attitudes and values. Workers are increasingly unwilling to take undesirable jobs or work in poor conditions associated with meaningless jobs. In their view of work, jobs should contribute to their individual self-esteem and fulfillment as well as to their economic security.

Today's work force is the best educated and best informed in history. Evidence of this change in pharmacy is quite clear, since the number of pharmacists entering the work force with an advanced degree—primarily entry-level Pharm.D. degrees—increases substantially each year. Many of these graduates today are investing another year or two in residency or fellowship programs, or both. More and more of the entrants to six-year Pharm.D. programs already have a bachelor's degree. Young people who have devoted so much time and effort to preparing for a career will not accept being assigned to jobs with narrow responsibilities that are performed under close supervision, nor will they accept being advanced at the same rate as others who join the organization at the same time, without consideration of differences in performance.

During the past two decades, the effects of the women's movement have been felt strongly in the increasing number of women who have opted for higher education and a career either in lieu of or in addition to marriage and motherhood. Accordingly, the quality of their working lives and careers must be explored within the expanded boundaries of their roles as wives, mothers, and employees in democratic society. We must address more directly and intelligently, and constructively the ways in which we can make more effective use of women at all levels of nonprofessional, professional, and managerial work activity.

**Competitiveness and Personnel Shortages.** I

this decade major changes in health care have resulted in an intensely competitive environment. Federal and state health-care reimbursement programs, as well as some health insurance companies (e.g., Blue Cross) have adopted a prospective-pricing system that has reduced income to hospitals for inpatient care. Some institutions have also been adversely affected by a decline in expenditures by federal agencies for medical education and research. More people are joining managed-care plans that direct patients to specific facilities that have been chosen partially on the basis of price. At the same time, the public has become more educated on health-care matters and better able to select care facilities for convenience, quality, and price.

Concomitant with those major changes in health care has been the development of increasingly severe personnel shortages in health care—especially in highly skilled areas such as nursing and pharmacy. The American Hospital Association reports that the vacancy rate for registered nurses has grown to 13.8% in critical-care settings and 11.3% for all types of nursing jobs nationwide.<sup>2</sup> Shortages of pharmacists have become sufficient to effect the reduction or curtail the expansion of pharmacy services in some hospitals.<sup>3-5</sup>

**Response to Change.** In this intensely competitive environment the hospitals that survive will be those that most clearly identify changes in the environment and develop effective responses to those changes. In the immediate future, successful hospitals will find new ways to reduce length of stay, more efficiently use resources, invent and apply new technology, and develop systems to ensure the flow of patients into the hospital. Services must respond to customer demand; competition must be dealt with; and an effective adaptation must be made to changes in market conditions.

### **Effective Strategic Planning**

**Productivity.** An institution's effectiveness in today's marketplace depends, ultimately, on the motivation and competence of its employees. It is the people who work in the institution who, in the final analysis, determine whether it thrives or languishes. "Our people are our most important asset" is not an empty slogan. The observation that "all our corporate assets go down the elevator every night" is particularly applicable to service-oriented industries such as hospitals. Managing people to achieve optimum human productivity in conceiving and executing the central purposes of the institution must be one of management's most fundamental goals.

Hospital pharmacy managers face the same challenges for productivity as do other members of the hospital management team. The potential contribution that can be made to hospital productivity by pharmacists is only beginning to be realized. Phar-

macists, by influencing the appropriate use of drug therapy, can have an important effect on the outcome of patient care. Drug therapy is already one of the most effective treatment modalities available; if drug technology continues to advance at the present rate, it could become the most important means hospitals have to serve their patients. The degree of success hospital pharmacy has in contributing to the productivity of hospitals will depend on our being able to attract and retain competent personnel and to use those staff members to creatively respond to the needs of patient care.

**Linking Strategic and Human Resources Plans.** Effective human-resource planning must be driven by institutional and departmental strategic initiatives and program (business) plans. However, the strategic-planning process for the department's services must be integrated with its human resources planning process. Many successful ways to forge this link between business planning and people planning can be found in today's for-profit companies.<sup>6</sup> For example, some companies request that formal human resources plans be submitted by division managers along with business plans, whereas in other companies human resource issues are raised informally during strategic-planning meetings. Some companies develop strategies to accomplish objectives in essentially all areas of HRM, whereas some build the process around one or more specific components such as management selection and development or employee career planning. Although the individual approach, emphasis, and plan may vary depending on the requirements of the business, each organization is more productive and more competitive as a consequence of establishing a human resources planning process that is clearly linked to the business plans.

Thinking ahead begins with an institution's and department's multiyear plan for programs and services. A department cannot effectively put together human resources plans until there is a clear statement as to what its future programs and services will be. The first step in a strategic-planning process is to conduct an environmental analysis in which internal and external information is generated and analyzed. It is necessary to evaluate the institutional culture and missions, know where the rest of the organization is going and what strategies are planned to respond to the changes occurring in health care, and understand the competitive circumstances of the institution. Missions, goals, and a strategic plan for the pharmacy that are in concert with the missions and strategic plans of the institution must be determined. Diversified pharmacy programs and services that improve patient outcome, increase income, and decrease costs in a variety of settings should be considered.<sup>7</sup> A department will be allocated more of the institution's resources when its functions are aligned to

effectively help the institution achieve its missions.

**Pharmacy Strategic Planning.** Generating and analyzing information about changes occurring within the profession helps to identify additional critical issues and uncover alternative strategies that others have used successfully to accomplish goals. Federal and state legislation and regulations, Joint Commission on Accreditation of Healthcare Organizations standards, and practice policies and standards developed by professional associations have a major effect on pharmacy. One of the most important examples of the latter is the consensus reached at the invitational conference entitled *Directions for Clinical Practice in Pharmacy*<sup>8</sup> (often referred to as the Hilton Head Conference) conducted in 1985 by ASHP. Acceptance by the profession of these conclusions could have a profound impact on the services provided by hospital pharmacies in the future and the quantity of the people needed to provide these services. The conferees concluded that

- A fundamental purpose of the profession is to serve as a force in society for safe and appropriate use of drugs;
- A fundamental goal is to promote health and that goal can best be pursued by working to promote optimal use of drugs (including prevention of improper use);
- Pharmacy should be involved in a very positive way (proactive) in advocating rational drug therapy, rather than just reacting to treatment decisions made by others; and
- Pharmacists should continue to have ultimate responsibility for drug distribution and drug control activities, but these functions should be carried out by technicians . . . thus freeing the major portion of pharmacists' time for clinical services. Further, drug distribution should be automated and mechanized to as great an extent as possible.

This consensus has been reaffirmed in many regional and state meetings throughout the country. In essence, it declares that we are a clinical profession, and that this must be our focus as we design manpower strategies.

New technology and new applications of existing technology must be evaluated, and their future role in the drug control process must be determined. And, of course, this question must be asked: "What are we doing that no longer meets a market need and should be stopped?"

### Pharmacy Human Resources Planning

With a clear statement of the department's missions and strategic program and service plans in hand, the hospital pharmacy manager is ready to begin developing human resources plans. Components of the plans should include (1) identification of the right number of people with the proper

skills that will be needed; (2) acquiring or training and developing the people who will be needed; and (3) motivating them to achieve their highest level of performance and become long-term employees. The time frame for these plans should be five to seven years.<sup>9</sup> Managers who want superior human resources must correct fundamental rather than superficial problems; they need to accept disappointments and unexpected outcomes of solutions to complex problems; and they need the staying power to work persistently at improving the quality of human resources. The problems are massive and stubborn, and it will take at least five to seven years for managers to install, live with, improve, and reap the benefits of major changes in personnel activities.

**Forecasting Staffing Needs.** The first step in the human resources planning process is to forecast what essential personnel will be needed in terms of quality (knowledge and skills) and quantity (number in each personnel category). This forecasting is becoming increasingly difficult for the hospital pharmacy manager. Over the last two decades most departments have experienced a great expansion in personnel. It is not atypical for a contemporary hospital pharmacy with state-of-the-art services to have 15-20 full-time-equivalent employees per 100 beds. A variety of skill levels have emerged so that the labor pool today would likely include high school graduates with on-the-job training, secretaries, trained pharmacy technicians, staff pharmacists, clinical pharmacists, and pharmacist-managers. Based on the strategic program plan, the pharmacy manager must predict how many people at each skill level will be needed for continuation of present services and any expected expansion of them. If the pharmacy manager has been aggressive in the strategic program planning process, it is likely that new programs will be in keeping with the philosophy of the Hilton Head Conference.

Pharmacy managers should take into consideration the fact that clinical services become more specialized as they expand, requiring pharmacists with more advanced and specialized training or experience, or both. In addition, departments typically become more stratified as they expand. More people and stratification bring about the need for additional people with HRM skills. If extensive clinical services are a part of the strategic program plans, pharmacists will need to be freed from many drug distribution responsibilities, as was recognized by the Hilton Head conferees. Only well-trained pharmacy technicians could assume a substantial amount of responsibility for the drug distribution system. Pharmacy managers—with strategic program plans in hand—must look ahead five to seven years and forecast personnel needs.

**Improving Job Design.** A new organizational design may need to be crafted by comparing the

in the department. Applying this concept also helps the department use Herzberg's fourth motivator—recognition of achievement. By associating placement into a higher professional level and increased pay with actual increases in knowledge and skills, management strongly acknowledges achievement. In addition, when salary is seen as recognition for achievement, it too is a motivator.

The responsibility to assist employees who want to grow and develop professionally goes beyond the job-related needs of the department. Some pharmacists, for example, set high career goals for themselves, the achievement of which will require additional academic or experiential training. The goal may be for a high-level management position or a specialized clinical position. For a young pharmacist with a B.S. degree, reaching this goal will likely entail academic work (perhaps an advanced degree) or a great deal of experience to be gained over several years, or both. If this pharmacist's goals are realistic, he or she is probably a highly capable person who could be productive for the department—productive enough that he or she will have made a substantial contribution by the time the training goals are met, even if the department does not have an appropriate position available and he or she goes elsewhere. To get the commitment of this person, the manager must provide support and assistance in the pursuit of his or her goals. Two examples of support strategies that are often helpful are creating flexible work schedules to allow for coursework and rotating positions to provide varied management experience.

**Recruitment and Selection.** Although the department's focus should be on developing employees to meet the needs of the strategic plan for people, it will have to recruit some people with the needed knowledge, skills, and ability from outside. When the business plan calls for expanded services, new positions, or vacant positions created by incumbents moving into new positions, these will be filled by new people. When specialized skills are needed for new ambulatory-care, home-care, or clinical programs and a review of the department's skills inventory does not reveal a person who has, or is close to having, these skills, it becomes necessary to look elsewhere for these talents. The department does need to recognize its limitations for training and development and face up to the need to go outside in some instances.

The recruitment and selection function takes on a new perspective when viewed in the context of an effective HRM effort. No longer should people be hired only to fill existing slots. A broader view should be taken. Will the candidates be able to grow and develop over the future years as the department itself grows and develops? Hiring with this future view requires a more sophisticated recruitment and selection process. First, the recruitment effort must be creative, aggressive, and com-

prehensive enough to generate a number of applicants for each position. Large departments need to undertake continual recruitment activities.

Since the future of the department is so dependent on the quality of the people brought into it, the selection process should be one of the most thoroughly planned and sophisticated managerial activities the department undertakes. Effective techniques for interviewing must be learned and used—for example "structured" interviews,<sup>26</sup> the team approach, and the use of work-sample testing.

Research suggests that recruiting, selection, compensation, job design, training, and communication procedures are, in many organizations, hastily and inadequately carried out. Any organization can begin to improve the management of human resources simply by doing the basics better. The most practical way to start is by performing all the routine ongoing personnel activities with extraordinary care.

### Requirements for Pharmacy Managers

Meeting the challenges for hospital pharmacy, as set forth in the missions agreed to at the Hilton Head Conference, will require unusually capable managers. If we are to mature as a clinical profession, we need leaders who can guide a pharmacy staff to assume new roles with higher-level professional responsibilities.<sup>27</sup> Those leaders need personal clinical experience if they are to fully appreciate the scope and depth of a pharmacist's clinical potential. Only by having faced clinical challenges and enjoyed the success of meaningful contribution to the resolution of clinical problems can one perceive the purpose of and generate value in those activities. Such experience could be attained by completing a Pharm.D. program and a clinical residency or by acquiring some years of experience in a clinical practice, or both.

After gaining clinical competence, those who choose to become competent managers must acquire skills, confidence, and experience in HRM. The necessary theory and principles of HRM can be acquired through various academic programs, selected courses, or personal pursuit of relevant literature. Structured experience can be gained in an administrative residency or through the guidance of a competent mentor. The mature judgment needed to manage larger numbers of people comes from some years of experience applying those principles and refining the concepts. Those who emerge as leaders learn to manage from strong individuals who, when given the freedom to operate, work with a sense of inner motivation and discipline. Good people attract others like themselves to the department. Under a leader with good human resources management skills, a culture develops within the department that thrives on commitment, exploration, and productivity.

### National Pharmacy Personnel Planning Strategy

My comments to this point have been directed at the need for hospital pharmacy managers to integrate effective HRM strategies with program strategies, and that indeed is my main message. However, another pressing need for human resources planning may have to be accomplished first. In fact, it may not be possible for pharmacy managers to do an adequate job of planning for staffing needs until this broad need is satisfied. I am speaking of the need for a rational pharmacy personnel planning process at the national level. Before we can make long-range plans for the efficient and productive use of personnel at the departmental level, we need to have some idea as to what direction the profession itself will be pursuing regarding the uses of pharmacy personnel and the nature of the training given to the various types of employees within that work force.

Speaking of the profession in general, Henry Manasse, dean of the college of pharmacy at the University of Illinois, cautioned recently that "we must focus our attention on the necessity and mechanism for rational [personnel] planning. To date, there has not been a rational planning mechanism, and indeed, a consensus does not exist about the nature of the required [work] force."<sup>28</sup> Evidence of the lack of personnel planning in the past can be found in pharmacy practice and education. For example, although we have created exciting, challenging jobs requiring more highly skilled, specialized professionals than we have available, there is continuing and pervasive use of overly qualified individuals in boring, unsatisfying jobs. In our colleges of pharmacy there is quite a dilemma over how to train pharmacy practitioners. Some colleges have declared that they will continue B.S. degree programs, others have converted or stated intentions to convert to entry-level Pharm.D. programs, and many more are sitting on the fence not knowing which way to go. The fact that we have such a shortage of pharmacists is evidence of a lack of planning. Over the last 11 years, a time when all sectors of the profession were expanding rapidly, the total number of pharmacy graduates declined by 2127 per year—a 26% decrease. Based on data from the American Association of Colleges of Pharmacy, the number of graduates per year seems to have leveled off; however, the shortage will continue and intensify since we still are not graduating enough pharmacists to replace those retiring or otherwise leaving the profession.

**Specific Needs of Hospital Pharmacy.** In the past, an obstacle to our properly planning for hospital pharmacy personnel needs, I believe, has been our inability, or unwillingness, to separate hospital pharmacy needs from other practice areas of the profession. When we looked at the clinical roles and the training that pharmacists need to fill

them, we found an abundant number and variety of such roles in hospital pharmacy. It was clear that the advanced knowledge and skills acquired in a Pharm.D. degree program could be useful in those roles. Few, if any, similar roles could be found in community pharmacy practice requiring such training. Even in those areas of the country where Pharm.D. graduates have gone into community practice in large numbers—and we have some areas where that has been occurring for over 20 years—such roles have not been shown to evolve. Our concerns about the impact that the development of substantially different roles and the training of practitioners at different levels might have on the profession have been responsible, at least in part, for our not pursuing these roles aggressively and training an adequate number of clinical specialists. A similar dilemma regarding pharmacy technicians has clouded our thinking and curtailed our effective use and proper training of them.

If we are going to maximize the effectiveness of hospital pharmacy practice, we must concentrate our thinking on the needs of patients served by hospitals and plan creatively for how we can best serve those needs. Holding the Hilton Head Conference was a giant first step in this direction.

**Future Program and Service Strategies.** The next step, I believe, is to hold another consensus-forming conference of practitioners and educators to develop a clear, well-thought-out strategic plan to accomplish those missions—a strategic plan with the appropriate program (services) and human elements. Some program strategies were suggested at the Hilton Head Conference. These should be expanded and given more definition and others should be added that will successfully overcome the barriers and move us forcefully toward accomplishment of the missions. Some questions about program strategy that need to be answered include the following: (1) What services would best promote health and the appropriate use of drugs? (2) What methods should pharmacists use to intervene in the drug-therapy process that would be aggressive and proactive? (3) How should clinical services be integrated with other pharmacy services, e.g., education, research, and drug control? (4) What control measures should be implemented as responsibility for the drug distribution system is delegated to pharmacy technicians?

Given a well-defined national strategic plan for programs and services, the next step would be to analyze those programs and services to determine what knowledge and skills are necessary for their successful accomplishment. Next, the functions need to be separated into higher- and lower-order competencies. Then, looking just at the higher-order ones, practitioners and educators should answer this question: What combination of academic and experiential training would best impart that body of knowledge and skills to pharmacists? In

answering that question, I would expect us to clarify the roles of post-B.S. Pharm.D., six-year entry-level Pharm.D., B.S. degree, residency, and fellowship programs in the training process.

The national plan for meeting pharmacy personnel needs should include strategies relating to the roles and training of pharmacy technicians. Most of us, I believe, accept that we need a well-defined class of supportive personnel that could assume the responsibility for all lower-order functions, especially those related to the drug distribution system. In assuming that responsibility, technicians will have to exercise judgment on issues relating to that system. The strategic plan should set goals related to the length and nature of technician training programs that would impart the necessary knowledge and skills. In considering this issue, I would suggest that we not limit our thinking to the products of the typical four- to six-month training programs prevalent today, but that we also consider what additional benefits could be derived from a one- or two-year training course. Various models that use pharmacists and technicians in different combinations (e.g., U.S. military forces and European countries) should be explored.

In this national plan, jobs should be designed that give the most satisfaction possible to the people who fill them. Jobs should be assembled in such a way that pharmacy personnel with different levels of knowledge and skills have frequent opportunities to apply their knowledge and skills in making decisions that are important to the program and services.

### Conclusion

In summary, we in health care today find ourselves in an increasingly dynamic and competitive environment—one in which only the most productive hospitals will survive. Successful hospitals will be those in which top management and department managers commit themselves to people planning as the way to gain a competitive advantage in the marketplace. Attracting, developing, and retaining the right talents for each department as the hospital makes changes in strategy, technology, and services will require more shrewd, wise, long-range planning than any other institutional endeavor. The essential elements of a strategic human resources plan are (1) identification of the quantity and quality of people who will be needed; (2) creation of jobs that are important and challenging; (3) matching employee interests, aspirations, and strengths with the needs of the institution and department; (4) provision for employee professional growth and development; (5) design of recruitment and selection methods that bring talent into the organization; and (6) creation of links between program objectives and people-planning strategies.

### References

1. Walters RW. HRM in perspective. In: Human resource management and development handbook. Tracey WR, ed. New York: Amacom; 1985.
2. Anon. News digest. *Mod Healthc*. 1988; Jul 29:5.
3. Davis NM. Shortage of pharmacists in hospitals. *Hosp Pharm*. 1986; 21:397.
4. Brink CJ. Wanted: staff pharmacists. *Am J Hosp Pharm*. 1986; 43:10-2, 16. News.
5. Stolar MH. ASHP national survey of hospital pharmaceutical services—1987. *Am J Hosp Pharm*. 1988; 45:801-18.
6. Mills DQ. Planning with people in mind. *Harvard Bus Rev*. 1985; (Jul-Aug):97-105.
7. Smith JE, Black BL. Hospital diversification: how to involve the pharmacy. *Am J Hosp Pharm*. 1987; 44:1059-68.
8. Anon. Directions for clinical practice in pharmacy: executive summary. *Am J Hosp Pharm*. 1985; 42:1287-342.
9. Skinner W. Big hat, no cattle: managing human resources. *Harvard Bus Rev*. 1981; (Sep-Oct):106-114.
10. Halcrow A. Operation Phoenix: the business of human resources. *Personnel J*. 1981; (Sep):92-101.
11. Johnson CA, Hammel RJ, Heinen JS. Levels of satisfaction among hospital pharmacists. *Am J Hosp Pharm*. 1977; 34:241-7.
12. Hammel RJ, Curtiss FR, Heinen JS. An evaluation of job and line satisfaction, role conflict, and role ambiguity among young pharmacy practitioners. *Pharm Manage*. 1979; 151 (Jan):29-37.
13. Curtiss FR, Hammel RJ, Johnson CA. Psychological strain and job dissatisfaction in pharmacy practice: institutional versus community practitioners. *Am J Hosp Pharm*. 1978; 35:1516-20.
14. Stewart JE, Smith SN. Work expectations and organizational attachment of hospital pharmacists. *Am J Hosp Pharm*. 1987; 44:1105-10.
15. Noel MW, Hammel RJ, Bootman JL. Job satisfaction among hospital pharmacy personnel. *Am J Hosp Pharm*. 1982; 39:600-6.
16. Miller DE, Kendall RW, Hynniman CE. Supportive personnel in pharmacy programs at the University of Kentucky Hospital: II. A career as a pharmacy technician. *Am J Hosp Pharm*. 1972; 29:570-4.
17. Coburn MJ, Gagnon JP, Eckel FM. Job satisfaction of hospital pharmacy technicians in North Carolina. *Am J Hosp Pharm*. 1980; 37:359-64.
18. Cortese LM, Greenberger DW, Schneider PJ et al. Job characteristics and satisfaction of pharmacy technicians. *Am J Hosp Pharm*. 1987; 44:2514-8.
19. Herzberg F. The motivation to work. New York: John Wiley and Sons, Inc.; 1959.
20. Quandt WG, McKercher, PI, Miller DA. Job content and pharmacists' attitudes. *Am J Hosp Pharm*. 1982; 39:275-9.
21. Wells BG, Lawrence G, Rawls WN. Level of pharmacy practice and job satisfaction of adult clinical and psychopharmacy pharmacists. *Hosp Pharm*. 1986; 21:117-26.
22. Shonebarger PJ, Einarson TR, Bootman JL et al. Air Force job satisfaction in pharmacy technicians. *J Pharm Tech*. 1986; (May-Jun):132-5.
23. Herbert WJ, Mergener MA, DeMuth JE. Continuing education support as a fringe benefit. *Am J Hosp Pharm*. 1982; 39:852-3.
24. LeRoy ML, DeMuth JE. Attitudes and policies about continuing education among Wisconsin hospital pharmacy directors. *Am J Hosp Pharm*. 1987; 44:1381-5.
25. Smith SN, Stewart JE, Grussing PG. Factors influencing the rate of job turnover among hospital pharmacists. *Am J Hosp Pharm*. 1986; 43:1936-41.
26. Campion MA, Pursell ED, Brown BK. Structured interviewing: repairing the psychometric properties of the employment interview. *Personnel Psychol*. 1988; 41:25-42.
27. Smith JE. Leadership in a clinical profession. *Am J Hosp Pharm*. 1988; 45:1675-81.
28. Manasse HR Jr. Assuring qualified pharmacy manpower for the future. *Am J Hosp Pharm*. 1986; 43:438-42.