Teaching Communication Skills to Pharmacy Students: An Integrated Approach

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INTRODUCTION

The profession of pharmacy is redirecting the focus of practice toward the expansion of professional services, the advancement of new techniques for patient monitoring, and the adoption of sophisticated methods to manage information. Many of these changes are attributed to the delegation of prescription processing functions to pharmacy technicians, computers, and robotics. In a profession where service is becoming the foundation for patient interaction, communication skills are essential to ensure the quality of patient care. This paper describes how communication skills are imparted to students at the interpersonal, technological, and organizational levels. For the purposes of this discussion, interpersonal communication is considered a micro-level skill because of direct interaction and involvement with others. Technological and organizational communication encompasses a macro-level framework for the application of communication skills across larger organizations, including hospitals, home health care agencies, wholesalers, pharmaceutical companies, and governmental agencies.

Interpersonal communication at the micro level is generally viewed as an active process for the formation of messages that are generated and transmitted by one person and subsequently received

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and translated by another person (1). Interpretative aspects of this process are influenced by psychological, cognitive, and cultural elements and traditionally focus on interpersonal relationships. Because medication therapy involves considerable interaction between the patient and the pharmacist, communication skills are needed to establish rapport with patients, to provide special instructions to patients, and to exchange information among pharmacists and other health professionals.

Technological communication is concerned with the design of organizations with respect to their environment, structure, and overall development. The general concept of technology includes the transformation process that the inputs of an organization undergo and what happens to these inputs as they are changed before leaving the organization. Technology in pharmacy refers to the processing of people where the outcome is to provide better educated practitioners, or healthier individuals in the case of professional practice. Individuals experiencing the positive aspects of a well-designed organization with respect to the use of technology can expect to receive better care as they proceed through the health care system. Technology, therefore, is used to describe and define the process whereby work is accomplished by the organization.

Another aspect of technology is its use in advanced information processing. Advanced information technologies include devices that transmit, manipulate, analyze, or exploit information (2). Examples include computer-assisted instruction, decision-making models, computer-assisted production technologies (exemplified by computerized third-party billing systems with integrated methods for patient monitoring), and the use of bar-code technology for merchandise control (3). These technologies have an impact on the entire structure of the organization. Organizational communication can be moderated by evaluating the information processing demands of the technology (4).

Much of the work in organizational communication is predicated on theories in management, organization, and communication. Conceptual frameworks for organizational communication have been developed from the work of Henri Fayol, Frederick W. Taylor, Max Weber, Douglas McGregor, Chester I. Barnard, and oth-

ers. Communication is the very essence of a social system or organization, and studies have established the link between communication and organizational effectiveness, productivity, job satisfaction, turnover, and absenteeism (5). The design of communication channels in organizations is extremely important in health care organizations because of the potential impact on organizational decision-making processes and measures of outcome.

The purpose of this article is to present one approach for integrating both the micro and macro constituents of communication theory into the pharmacy curricula. A general outline is shown in Figure 1. Methods for incorporating interpersonal communication skills into the pharmacy curricula are well documented in the pharmacy literature, and this paper will only review these topics. The major focus of this paper is to integrate communication skills into the pharmacy curricula at a broader level to encompass technological and organizational communication. The objectives of this paper are to discuss the topics that are covered in an undergraduate pharmacy course focusing on interpersonal communication, technological communication, and organizational communication; to describe projects that enable students to assimilate the concepts that are covered in each area; and to present methods for integrating interpersonal, technological, and organizational communications into other areas of course work. The overall goal of this course is to apply these concepts in situations where students can have a positive impact on patient care. The major topics focusing on patient care include patient education, patient compliance/adherence, quality of life, and improvement of the continuity of patient care through referral networks.

The major objectives of this course are to enable students to develop verbal and nonverbal communication skills in the area of interpersonal relationships; to provide students with the opportunity to develop and refine communication skills in the area of pharmacy-related technology; and to help students understand the structure, the flow of information, and the process of communication in complex organizations. Examples for class discussion are derived from actual experience or created hypothetically to simulate various prac-

FIGURE 1. Course Outline for an Integrative Approach to Develop
Communication Skills Among Pharmacy Students

Micro-Level Skills

Interpersonal Communication

Assertiveness
Barriers to communication
Communication apprehension and shyness
Counseling the elderly
Counseling the terminally ill
Empathy
Listening skills
Patient education and compliance

Macro-Level Skills

Technological Communication

Diffusion of innovations
    Home diagnostics and technology
Information processing in health care
    Managing complex technology

Organizational Communication

Theoretical basis for organizational communication
Patterns of communication in organizations
Communication networks in pharmacy

tice settings. If this is a required course, the instructor must have a pharmacy background to apply the course material properly.

MICRO-LEVEL SKILLS

Interpersonal Communication

As the purpose of this article is to describe a framework for integrating technological and organizational communication into the pharmacy curricula, this section will only summarize some of the literature describing interpersonal communication skills. Some general references include a discussion of topics mentioned in the course framework presented in Figure 1. Extensive work has been done in the area of communication apprehension and shyness by Baldwin and colleagues, Berger, and others (6-9). Work in empathy, patient counseling, compliance, and treatment adherence is documented in several manuscripts and texts (10-13). In addition, several texts are available for general reference (1, 14-16). Although this list is not exhaustive, it does provide a starting point.

Interpersonal communication skills establish the foundation upon which further skills can be developed in the area of technological and organizational communication. A sequential approach enables students to understand the structure of the course and the objectives to be accomplished at each level. Complex information can only be imparted to patients if pharmacy students have a thorough understanding of basic interpersonal communication skills.

MACRO-LEVEL SKILLS

Technological Communication

Technology is used to describe and define the work of the organization. Through the development of better materials and technological skills, the pharmacy market has experienced a diffusion of technological innovations such as new medication delivery systems, medical devices, and biotechnological tools (including in-home testing and diagnostic kits), all of which have revolutionized patient therapy.

Diffusion of Innovations in Health Care

Technological advances have spurred patients' interest in self-care and self-assessment products. Pharmacists are consulted for their expertise as providers of technical information, diagnostic interpretation, and sound recommendations for in-home diagnostic kits. To adequately convey this information to patients, pharmacists must be able to explain the operation of complex medical devices and in-home test kits in a language that patients can understand. To help students understand this technology, principles of marketing are incorporated into the lecture. First, a marketing approach is used to explain the diffusion of new technologies into the pharmacy market. Second, practical experience with in-home testing kits is a useful approach for encouraging students to develop and refine their communication skills. Workshops can be created that enable students to work with the home diagnostic test kits and to learn about the technology used with each kit. Third, summary reports and verbal interaction with other students and faculty can be used to corroborate practical experience.

Information Processing in Health Care

Another component of technology includes the process used by pharmacists to dispense a prescription or over-the-counter medication to the patient. Major constituents of this process include prescription processing, medication delivery, and medication therapy monitoring. Because prescription processing has become more complex as a result of government and private third-party programs, computers are becoming indispensable technological tools for processing prescriptions, monitoring drug utilization, and monitoring drug distribution. As pharmacy managers continue to place computers in the prescription department, the structure of communication flow in the prescription department will need adjustment to accommodate this technology.

To help students understand the importance of computers in pharmacy practice, model systems for third-party prescription processing are presented to students by the instructor. Students are taught how to integrate and control the entire system through the use of schedules, plans, and time tables to ensure that appropriate tasks are

accomplished. Communication is described in this process as the mechanism for standardizing and coordinating the work. The work required to process third-party claim forms can be standardized through the work process itself and through the skills and knowledge of the people who complete the work. Once the claim processing capabilities of the computer are understood, the work process itself can be standardized by relaying consistent information to all employees who will be performing third-party processing functions. Incoming claim forms will be processed in a consistent manner, allowing the delegation of certain responsibilities in lieu of close regulation by supervising pharmacists. Installation of proper communication channels will help consolidate information, prevent information overload, and facilitate decision making. Development of communication skills in technology requires that students understand the technology used to process prescriptions and have knowledge of the medications, medical devices, and in-home test kits used by consumers. Proper communication ensures the accuracy and proficiency of dispensing, as well as the control of technological tools and processes associated with medication delivery.

Pharmacists serve as the link to patients in the community through which information about the innovative technology is disseminated (17, 18). As gatekeepers, pharmacists interpret the meaning of the innovation and often make a preliminary assessment about its potential utility for the main activities of patients. Besides learning how to apply communication skills in the area of complex technology, students must develop adaptability skills that will contribute to lifelong learning (19). Once students have a thorough understanding of the use and importance of technology, interpersonal communication skills can be linked to the structural aspects of the organization.

Organizational Communication

The structure of an organization is defined as the manner in which individuals are allocated to perform various tasks and the way coordination is achieved among the tasks (20). Organizational communication is the link that keeps the organization together. Communication is necessary for dealing with the complexity of in-

formation, issues concerning control, and managerial decision making. Organizational structure, therefore, is a pattern of interactive communication and coordination that links the technology, task, and human resources of the organization to ensure that the organization accomplishes its purpose. The following theories are not theories of organizational communication, but they use communication as a managerial tool for motivating workers and controlling organizational processes.

Theoretical Basis for Organizational Communication

Pioneering work in organizational communication was predicated on the theories of scientific and classical management. Frederick Taylor's scientific management theory dealt with the problems of worker efficiency, effectiveness, and compliance. Although Taylor's studies resulted in most of the work responsibility being placed on the workers, Taylor is best known for his use of time and motion studies, instruction cards for workers, and standardization of tools. Henri Fayol's contribution to communication included the codification and dissemination of management principles, unity of command, and the facilitation of problem solving through the use of face-to-face communication. Max Weber's contribution to communication and the organization of social systems is immense and can only be summarized in this discussion. Many of Weber's contributions to organizational communication stemmed from his use of the term *bureaucracy*. Although this scheme for the allocation of workers, promotion, rewards, and rules was somewhat impersonal, Weber's contribution to organizational communication included the use of written communication, rules, rational policies, and the use of a hierarchical chain with differences in status, authority, and responsibility (21, 22).

During the early 1900s, several theorists proposed an eclectic approach to organizational communication that addressed broader concerns relating to the use of power, worker compliance, individual behavior, and the importance of communication in organizational processes. Interest in the relation of managerial effectiveness to social and psychological aspects of the worker led to the emer-

gence of the human relations movement in the 1930s (23). Contributions to organizational communication included the encouragement of upward-directed communication, the discovery of an informal communication system, and the social needs of workers. Later theoretical developments by Maslow, McGregor, and Likert reinforced the conclusions made by earlier investigators. Maslow's need hierarchy pointed out that motivation is not merely economic or social, but also tied to one's sense of self-worth or self-actualization. McGregor's Theory X and Y and Likert's System 4 both provided support for participative management with emphasis on open communication in decision making (24).

The integration of organizational communication into the pharmacy curricula is accomplished through discussions of personnel management, management of the organization, and interaction with other health care organizations. Following a logical progression from interpersonal communication to organizational communication, students are able to view the organization as a total system. According to open-system theory, organizations are living systems that experience birth, development, and death (23, 25). Embedded in this theory are concepts such as wholeness, hierarchy, openness, and feedback. Unlike the closed-system model used by Taylor, Weber, and Fayol, the open-system model focuses on the relationship of the organization to its environment. Organizational effectiveness and survival are determined by the organization's ability to control and manipulate its environment, to acquire and process inputs, and to maintain stability. Using this approach, students realize the importance of communication skills in maintaining a viable relationship among employees, managers, and individuals outside the organization.

Patterns of Communication in Organizations

The previously mentioned theories of management are used to describe various patterns of communication in organizations. For example, organizational charts are used to illustrate lines of authority, responsibility, communication, and span of control throughout the organization. Students are provided with examples of various management structures found in small and large community phar-

macies, hospitals, health maintenance organizations, pharmaceutical companies, and third-party program arrangements. When students are presented with these charts, they can visualize and understand how communication flow can be used to influence and direct the management of personnel.

Organizational charts are used to explain the uses and purposes of formal communication, including downward, upward, and horizontal channels of message flow between organization positions. Downward communication channels, in general, are used to provide information to workers, while upward communication channels are used to evaluate job-related problems, performance, and feedback. Students are shown how horizontal communication channels can be used to manage complex technologies in the pharmacy department by coordinating the flow of messages across functional areas involved with the technology. In addition, communication structure serves as a heuristic device for explaining other principles of management, including cash flow, planning, and controlling.

Communication Networks in Pharmacy

Besides the need for interpersonal communication skills with patients, pharmacists must interact with health professionals in other organizations. For example, a pharmacy may provide services to home health care agency enrollees, nursing home patients, and third-party program beneficiaries. Many hospitals maintain contracts for rehabilitation services, mental health services, and outpatient pharmacy services. In this case, patterns of communication involve a network of different organizations. This communication network is used to explain how the pharmacy is influenced by external factors, such as technology, competition, and the social environment.

Pharmacy students can easily understand the importance of communication in organizations by looking at the process of third-party contract negotiation. Sample contracts are used to help students understand the basis of contract formation between employers and community pharmacies. This example provides an environment to facilitate communication among employers, third-party providers, and patients.

Another important aspect of the pharmacy network is the role of the pharmacist as a gatekeeper in the health care system. By channeling patients to appropriate care providers, pharmacists maintain the continuity of care and make services appear less fragmented and decentralized among providers. To channel patients, pharmacists must be aware of the health services offered in their community. Pharmacy students are encouraged to identify these individuals through community service work and consulting activities. The importance of communication is evident as students assimilate the variety of communication skills necessary to maintain and coordinate services among several organizations.

CONCLUSION

The intention of this paper is to offer an integrative approach to teaching communication skills to pharmacy students. This approach differs from many of the communication courses currently taught in pharmacy schools because it includes other areas such as management, marketing, and sociology in the framework for teaching the course. The advantage of this approach is that it allows integration of principles from other classes in management, marketing, and sociology with pharmacy practice and clinical pharmacy, adding continuity to the pharmacy curricula in pharmacy administration and pharmacy practice. These principles are instrumental in demonstrating to students how pharmacists use communication to improve patient care, achieve continuity of care, and increase the interaction between pharmacists and patients—all of which lead to increased patient satisfaction. Theories of communication are interspersed throughout several courses in pharmacy curricula. A class in professional communication can be used as the keystone to help pharmacy students integrate these diverse courses. Another intention of this paper, therefore, is to describe various topics that would be appropriately included in a fully integrated communication course and to educate those individuals who are seeking more information in this area.

Another important outcome from this paper is the need to standardize the content of course material. Recently, a nationwide study was conducted to investigate the instructional content of social be-

havioral pharmacy courses (26). Major areas of emphasis included patient compliance-adherence, patient education, and exposure to communication skills appropriate to various situations and circumstances. According to the results of this study, courses designed to improve interpersonal communication skills are interspersed throughout many parts of the pharmacy curricula. As a recommendation from this discussion, efficiency can be achieved by consolidating these topics under one class designed as a comprehensive course to help students develop their interpersonal communication skills and understand broader issues that require the application of communication skills to larger organizations. Although communication skills can be acquired from a number of sources, this paper provides a framework for standardizing course content. The content of this course does provide a way to integrate material from other courses taught in pharmacy administration and pharmacy practice.

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