3 / The Occupational Health Nurse: A New Perspective

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THE American Association of Industrial Nurses has defined occupational health nursing as "the application of nursing principles in conserving the health of workers in all occupations. It involves prevention, recognition, and treatment of illness and injury and requires special skills and knowledge in the fields of health education and counseling, environmental health, and rehabilitation."[2]

The occupational health nurse applies the art and science of nursing for the purpose of conserving, promoting and restoring the health of individuals at and through their places of employment. The occupational health nurse is a professional who works both independently and cooperatively as a member of an occupational health team. She may be one of few or of many professionals or she may be the only professional person who works full time in the occupational health unit. In either case, the nurse's primary responsibility is worker health. The nurse adapts and applies public health principles and environmental health practices as she participates in activities that meet the needs of the employees and of the establishment.

THE NURSE ON THE OCCUPATIONAL HEALTH TEAM

Occupational health requires a multidisciplinary team effort. Success depends on the ability of the various members to work independently and, when required, to join forces to achieve a common goal. This goal is the continued good health and safe working practices of employed persons. The setting for the occupational health team's activities is the place of employment.

Because the team is multidisciplinary, the team leadership must be shared. Successful functioning requires that each discipline understands the special contribution of the other members and that each knows how to and when to bring those specialized competencies of the others into play.

The short supply of occupational health professionals and the increased demand for occupational health services make it imperative that there be optimal utilization of the special skills and knowledge of occupational health nurses who can carry a large part of the responsibility for worker health and safety.

Public Law 91-596, the Occupational Safety and Health Act of 1970, provides for the setting of health and safety standards and for their enforcement. At the place of work, it should be the nurse in the occupational health unit who is the focal point for the medical management and industrial engineering practices as these relate to the individual worker's health.

There are three factors that influence what the nurse does and, thus, influence her effectiveness as a member of the occupational health team: (1) the image that society has of the role of the nurse and of her contribution to the delivery of health

and medical care, (2) what the medical community sees as the nurse's role and (3) how nurses view their place in, and their contribution to, the health and medical care system.

The more than 19,000 occupational health nurses presently employed by industrial and governmental establishments represent the single largest category of personnel in occupational health. Their skills and knowledge must be so utilized that they can make a significant contribution to worker health.

NURSING SERVICE STAFFING PATTERNS

The size and type of establishment in which the nurse works determine in large part the number and types of positions that make up the nursing staff. It is estimated that 65% of the occupational health nurse positions are on staffs of 3 or fewer nurses. Approximately 40% of all the occupational health nurse positions are filled by nurses who are an establishment's only nurse. Less than 13% of the positions for nurses working in occupational health are on staffs of 8 or more nurses. On the basis of data from a nationwide study of occupational nurses, published in 1966 by the U. S. Department of Health, Education, and Welfare,[19] it can be estimated that only 25% of the nurses work in an occupational health unit where the physician is regularly present for 35 or more hours per week. Therefore, it is imperative that the nurse who is employed to work as the establishment's only full-time occupational health professional be able to function as an occupational health nurse specialist.

OCCUPATIONAL HEALTH NURSE POSITIONS

The occupational health staff nurse is a registered nurse who is employed to work as a nurse in an established occupational health service. She performs her professional duties under nursing supervision, working closely with physicians and other members of the occupational health team.

The occupational health nursing supervisor is a registered nurse with special preparation and experience. She has one or more nurses under her direction. She is authorized to assume responsibility for planning and administering the nursing service within an occupational health program. She utilizes current Standards for Nursing Services as established by the American Nurses' Association in 1973[20] as she works cooperatively with the occupational health nurse specialist, the medical director and management to develop the scope of the occupational health program. She sets the standard for nursing practice and helps the staff nurse to achieve this. Her job responsibilities require that she function at a management level within the occupational health service formulating policy, selecting, orienting and appraising staff.

The occupational health nurse specialist also is a registered nurse with special preparation and experience. She functions independently and carries the responsibility for the administration of the occupational health program, including the planning, implementation and evaluation of the services provided for workers. She often coordinates the medical and environmental aspects of the occupational health program, working cooperatively with the physician, the industrial hygienist and the qualified safety professional when their expertise is required. She carries the responsibility for professional nursing practice, including cooperatively developing with management and the consulting physician the scope of the establishment's occupational health program and the guidelines for the care she provides for workers who are injured or ill. Such guidelines permit her to function legally and ethically as the physi-

cian's agent and to provide, to the extent of her ability, the care that workers need.

WORKING RELATIONSHIP BETWEEN MEMBERS OF THE OCCUPATIONAL HEALTH TEAM

According to the World Health Organization,[17] a complete service has five broad stages: (1) health maintenance or health attainment, (2) increased risk cases, (3) early detection, (4) clinical and (5) rehabilitation. The purpose of occupational health is fulfilled most effectively when services in all of these stages are provided jointly and/or cooperatively by industrial hygienists, the qualified safety professionals, occupational health physicians and nurses, with management approval and support. In 1971, the American Medical Association adopted a revised Scope, Objective and Functions of Occupational Health Programs.[7] This statement prepared by the Department of Environmental, Public and Occupational Health provides the broad outline for the delivery of care. The seven activities in support of the objectives of an occupational health program are: (1) maintenance of a healthful work environment, (2) preplacement examinations and/or screening, (3) periodic health appraisals, (4) diagnosis and treatment, (5) immunization programs, (6) medical records and (7) health education and counseling.

The Nurse and the Physician

The first time an expanded role was assigned to the nurse was when the industrial nurse, at the time of World War I, manned the first-aid centers of the defense plants and, as the physician's assistant, provided care for workers who were injured. Then, as now, nursing and medical practice were interrelated and frequently indistinguishable from each other. "The same act may be clearly the practice of medicine when performed by the physician and likewise a practice of nursing when performed by the nurse" is quoted from the March 7, 1959 issue of the *Journal of the American Medical Association*.[9] The article, The Legal Scope of Industrial Nursing Practice, quotes the judgment of the California District Court of Appeals: "A nurse's diagnosis of a condition must meet the standard of learning, skill and care to which nurses practicing that profession in the community are held. A nurse, in order to administer first aid properly and effectively, must make a sufficient diagnosis to enable her to apply the appropriate remedy."

The keystone of the occupational health program is the working relationship between the nurse and the physician who provides the medical direction for the program. Ideally, this working relationship permits the physician to be responsible for the medical aspects of the program and the nurse to be responsible for providing most of the services. The physician provides written medical directives. These permit the nurse to function as his agent when he is not present; however, he is available for consultation when the nurse has questions about how to proceed in special circumstances.

The occupational health nurse carries on one dependent function; that is, the provision of definitive care to workers who are injured or ill, legally and ethically as a nurse when she works with a physician who provides medical directives as the basis for the treatments she provides.

The nurse's ability to make a nursing diagnosis is the basis for her effective collaboration with the physician. A nursing diagnosis is to nursing care what the medical diagnosis is to medical care. The nurse cannot plan and provide care until she has made the nursing diagnosis.

In the June, 1957 issue of *Nursing Research*, Fay G. Abdellah defined "nursing diagnosis" as "the determination of

the nature and extent of nursing problems presented by the individual patients or families receiving medical care."[1]

The December, 1963 issue of the *American Journal of Nursing* contains an article by Nori I. Komorita,[14] in which she states that a "nursing diagnosis is a conclusion based on scientific determination of an individual's nursing needs, resulting from critical analysis of his behavior, the nature of his illness, and numerous other factors which affect his condition. This conclusion should then serve as a guide for nursing care."

The primary significance in the nursing diagnosis made by the occupational health nurse is that frequently she sees the injured or the ill worker before the physician and her diagnosis often determines the care that the worker receives. This fact and the fact that the occupational health nurse provides nursing care for workers who are not patients but workers who all too often do not see any need or reason for nursing care makes the occupational health nurse's role different from that of the nurse in a hospital setting. These influences also makes the occupational health nurse's relationship with the physician different, and both the nurse and the physician must recognize this, as must the employer. Establishing a collaborative relationship takes time, and trust must be developed. The physician needs to know how the nurse arrives at her nursing diagnosis and the nurse needs to know what the physician would do under certain circumstances. Respect for the ability of the nurse and recognition of her limitations are required. The ideal situation would be to have the occupational health nurse and the consulting physician work together until they know each other's ways of functioning. What frequently happens is that the nurse is employed full time and the physician is on call. This may limit their efforts as well as the scope of the occupational health program.

Increasingly, the occupational health nurse, with preparation, will take on new and expanded responsibilities. The nurse's curative or therapeutic function is, at times, to provide emergency care for workers suffering major injuries or acute medical conditions. At other times, she functions within the scope of the occupational health service's policy and the medical directives of the physician and gives definitive care to workers whose injuries and illnesses are within her competency to treat.

The occupational health nurse specialist must be able to identify health problems and give immediate appropriate nursing care. She must recognize when it is necessary to refer a problem and how to involve the other members of the occupational health team when their specialized skills and understanding are required to handle the problem presented. They, in turn, must be ready to receive her referral and to respond. Management must recognize that the nurse can be effective only if she has sufficient backup from the others on the occupational health team. She must also have sufficient help from clerical and technical personnel so as not to be so busy with these activities that she cannot do what she should be able to do best—provide nursing care.

The Occupational Health Nurse, the Industrial Hygienist and the Safety Professional

The nurse with a high index of suspicion can be the most valuable co-worker that the occupational health physician, the industrial hygienist and the safety professional can have. Her desire to know and her ability to detect the possible relationships between the physical and mental ill health of workers and the stresses of their jobs are essential charac-

teristics of the occupational health nurse specialist. She must be able to recognize and to identify the hazards of the establishment in which she works and the potential for harm to worker health and safety. The occupational health nurse specialist periodically performs a "walk-thru"; that is, she is out in the work area for a purpose. She makes a visual examination of each process and of each employee's working area. She makes an assessment as to the extent of the worker's exposure, if any, to any hazard. The accuracy of her assessment depends on the amount of her education and experience. The occupational health nurse should be encouraged to do a "walk-thru," and her assessment should be that of a knowledgeable nurse. She is not—nor should she try to be—an industrial hygienist or a safety professional. When the nurse is the only health professional member who works full time, she must be knowledgeable about, and involved in, certain industrial hygiene and safety activities. Those nurses who work with industrial hygiene and industrial safety professionals are less involved. That is not to say that these nurses should not be curious and/or knowledgeable. Such nurses' involvement is to ask questions, to refer and to support the program of the other professionals.

The nurse who is the only member of the occupational health team working full time has three major responsibilities in the area of industrial hygiene: (1) to be out in the work area using the four "rules of thumb" (see below), (2) to have a research orientation about man-environmental health problems and (3) to be involved and participating in planning and conducting health conservation activities.

The first of the nurse's responsibilities is to be in the work area frequently. How often will vary, depending on the size and type of the industry and on how sophisticated the supervisors are and how great the methods of control are. The nurse is not to compete with, but to cooperate with, other disciplines. If she is to function as an occupational health nurse specialist, she should know the products, raw materials and processes well enough to be able to detect potential danger. She should know the source books available, the laws and the codes involved and the people with expertise to whom she can turn for additional information and for help. It has been said that "answers are easy; it is formulating the question that is difficult." The occupational health nurse's job is to ask questions in such a way as to generate interest and/or begin action that results in a survey to determine if there truly is a problem and, if so, to have it brought under control.

There are four rules of thumb that nurses use to determine if there are problems and to determine if there is a need for more expert help than is available. Is the housekeeping routinely good?—is it routinely poor?—is the first rule of thumb.

Good housekeeping in industry, as in the home or the hospital, is possible only when everyone works at it. This means keeping everything in working order—keeping the area clean, workbenches uncluttered, aisles and stairs clear—as well as day-to-day maintenance of building and yard areas. If housekeeping is routinely poor, some expert help is required.

As she moves through the plant, the nurse should automatically check the housekeeping. When she detects trouble areas, she brings these to the attention of those whose responsibility it is to do something about the areas.

The second rule of thumb the nurse can use to determine if there is a need for more expert help applies to the area of noise. If it is so noisy that when she asks a question the person answering has to shout to be heard, it would be wise for

the nurse to suggest to management that they have someone do a sound-level check because it probably exceeds what is considered to be safe.

The third rule of thumb that the occupational health nurse can use is "if she can see dust, if she can smell the solvent or the chemical, if she can see, smell or feel the mist"—these are signs that indicate to her that these observations should be brought to the attention of *experts*. The nurse's role is to inform the person who is responsible of her concern, perhaps suggesting the need for discussion with a hygienist. The decision to have it done is a responsibility of management. This third rule of thumb is less useful than the first two because many Threshold Limit Values (TLVs) can be exceeded before there is an odor, and many dusts that can be seen are merely a nuisance and not a hazard.

Control of toxic or hazardous materials is an engineering problem, a job for the expert that may involve substitution of materials or processes, redesigning or relocation of the work area, installation of ventilation systems and selection of personnel protective equipment. These are the activities carried on by the industrial hygienist. Such controls, when in place, should be checked regularly to ensure that they are functioning properly. When the industrial hygienist is a full-time staff member, this is his job; when he is not full time, someone else, perhaps the industrial safety professional and/or the nurse, should be responsible.

The fourth rule of thumb the nurse can use to measure the effectiveness of the environmental control program relates to the level of personal hygiene practices among the workers. When the nurse is out in the work area, she should check the hygiene facilities. Good personal hygiene is possible only when adequate facilities are provided. These include hot and cold water, soap and towels. Clothing also plays an important part, especially when the operation is very dirty or oily. Workers on these kinds of jobs need protective clothing and their work clothes must be changed frequently. Good personal hygiene depends on the worker's understanding of the need for it and his acceptance of the responsibility for his own personal hygiene. Teaching him how to do so is a nursing activity.

The second responsibility of the occupational health nurse is to have a research orientation; that is, to be able to gather data, to look for relationships between man and his environment and to determine the possible relationship between the signs and symptoms that are presented by the employee and his occupation.

It is essential that the nurse understands that an occupational disease is one out of or in the course of employment and knows that a causal relationship must be established between the worker's illness and his occupational exposure. Whether or not the illness has resulted from a potentially hazardous occupational environment depends on the character, intensity and duration of exposure. The occupational health nurse must be acutely aware of man-environment health problems. She must record information so that the relationship can be established between a complex or a single stress agent, the worker's response to the stress agent and whether this was in the work or the home environment.

The occupational health nurse has many opportunities to identify occupational diseases. For example, when the reports are reviewed and the nurse finds that the symptom, the headache or the complaint of dry, itchy skin reappears, she should determine if it does so at a certain time in the day and if it is from one department in the establishment. She should investigate to see if all the people with the symptoms worked in the same

department with the same substance. When she sees any relationship between the work environment and the worker's symptoms, she brings this to the attention of the physician and to the other occupational health professionals with whom she works.

The third responsibility of the occupational health nurse is to be involved in planning and conducting the health conservation activities. These include assessment of worker health before he is employed and at selected intervals thereafter. The responsibility of the nurse varies, but usually includes helping the worker understand the purpose of the procedures, which may be a complete physical and mental assessment or a screening test. Nurses take and record the previous work history as well as the health and illness history. Nurses complete as much of the examination as they are prepared to do and that they and the physician have agreed is practical and safe. Nurses can be involved in those health assessment procedures that are set up to identify workers who are reacting to stress. To do so, the nurse should know the standard procedures and be able to identify those responses that are outside the normal response range.

The results of all examinations are discussed with the employee and, when indicated, the nurse plans with him for follow-up. In this way, the nurse takes part in the medical control program. She keeps workers who are exposed to hazards under periodic health surveillance that permits early detection of overexposure. In addition to examinations, a constant vigil is maintained to detect signs or symptoms of occupational disease when workers come to the occupational health unit. The nurse is in a unique position to observe and report signs and symptoms of trouble long before a serious episode may come to the attention of others in the establishment. The nurse must be familiar with the common symptoms of early industrial intoxication, such as the pallor and colic of the lead worker, the stomatitis of the mercury worker, the breathing difficulty of workers exposed to pulmonary irritants and folliculitis from cutting oils, as well as changes in the audiogram of the worker exposed to noise. She must know the signs and symptoms resulting from stress and heat as well as the other occupational disease entities that are possible in the establishment in which she works. Keeping alert to the new processes and use of materials is also essential.

Workers need to understand the health hazards associated with their jobs, the control measures for these and their responsibility in protecting their health and in working in a safe manner. Helping the worker to do so is a nursing responsibility. This may be the most significant contribution the occupational health nurse can make in support of the Occupational Safety and Health Act.

The occupational health nurse must understand and appreciate the importance of production and the interrelationships of departments within a business enterprise. When she does, she is more able to be realistic concerning what the health professional can do about the hazards in the work environment and the health needs of the employees. Her health education focuses on helping workers know how to protect their own health and to use health resources and safety equipment to the fullest.

For the effective occupational health nurse, safety is a way of life. She trains her eyes to see, her ears to hear and her mind to understand the unsafe condition, the unsafe attitude. Every action of the nurse, everything she says or does not say influences the worker's attitude toward health and safety. By her own example, she demonstrates to others the value she places on doing things the safe way.

When in the work area, she wears safety shoes, safety glasses and a hard hat. The nurse communicates her interest in and her understanding of what and how the workers are doing, and she uses the prestige of the nurse's position to reinforce the safety directives and educational efforts of the foreman and safety personnel.

In the Health Department and other key places throughout the plant, the occupational health nurse arranges or helps to arrange bulletin boards, pamphlet racks and safety exhibits. She reviews material before recommending or selecting appropriate safety and health educational materials. In large establishments, full-time safety professionals have the responsibility for safety and accident prevention. If the nurse or some representative of the Health Department is not involved to some degree, however, the safety education program and the relationship between personnel of the Health and Safety departments are less than ideal.

The nurse should not take over the responsibilities of the supervisor, the foreman or the safety professional. When she is out in the work area and sees problem areas or people working in an unsafe manner, she calls this to the attention of the person who is responsible.

Safety committee responsibilities frequently are assigned to the occupational health nurse in both large and small industries. At times, the nurse is an ex-officio member; in some instances, she serves as secretary. Management should ensure that the nurse is a participating member of the safety team. The nurse brings to this activity her understanding of human behavior and the firsthand information she has of the cause-and-effect relationship of unsafe acts and injury.

The nurse should teach health and safety and reinforce what others have taught. She can do this as she gives care to workers who have been injured or who are ill. The working relationship between the occupational health nurse and the Safety Department personnel centers around control of lost time and injuries. This should be a collaborative one, with the nurse responsible for the health care and education the worker requires and the safety professional responsible for education and practice for accident prevention.

The Occupational Health Nurse and the Worker

The objectives of an occupational health program are (1) the identification of health hazards in the work environment and their elimination or control, (2) the provision of curative care and rehabilitation for people who have been injured or become ill from work-connected causes, (3) the provision of services that ensure the optimal compatibility between the worker's capabilities and limitations and the physical, mental and emotional demands of the job and (4) the promotion and protection of the worker's health. If these are to be met fully, the worker himself must be involved.

The nurse is in an ideal position to participate in the employer-employee education program, especially as she works with small groups of workers and/or on a person-to-person basis. The occupational health nurse makes maximal use of all opportunities for education as these arise in the exercise of her professional duties. When removing a loose foreign body from the eye of a worker, she cautions him about his need for protective equipment and/or she checks the fit of his goggles. In caring for a worker with a burn on his hand, she notices his soft-toed sandals. She inquires about his lack of safety shoes and stresses why he should be at work with the regulation footwear.

The handling of each situation has as its purpose the enhancement of the

health of the worker. The nurse teaches by word and example. She gives emphasis to the importance of care for minor health problems and to the development of health and safety habits that prevent illness and injury or the aggravation of already existing problems.

The men and women to whom the occupational health nurse gives care frequently bring their home and family problems to work with them. The occupational health nurse has many opportunities to help these people, who often are in a crisis situation. Such upsets as these may be acute but usually are temporary in nature. The worker's response to stress represents his response to a situational difficulty that he cannot understand or handle by himself.

The nurse provides an opportunity for the worker to discuss his feelings and his problems with her. She looks for and tries to understand nonverbal communications. She listens to what the worker says. She makes a conscious effort to understand what the problem or situation means to the worker, meanwhile being aware of and understanding her own behavior, her attitudes and her feelings. She works at not being a "telling person."

The nurse intervenes on the basis of her understanding that a helping person can influence the course of a crisis toward a more adaptive outcome. She encourages the worker to examine the problem—whether this is his misuse of drugs or alcohol or his concern about a sick child or bills he cannot pay. She helps him to think about how he can handle his problem. She gives encouragement and support and, at times, anticipatory guidance. She uses the anxiety of the moment to help the person accept his need for care or for changing his behavior. She helps the worker to identify alternative ways to handle his problem and to select the one that he thinks will be the most satisfactory. Astute management realizes that the nurse has a wide domain and provides leeway for her to exercise her influence. The experienced occupational health nurse probably is acquainted with more employees than anyone else in the establishment. She can and does influence behavior; for example, a young man with long hair and dressed in the mod style said to the nurse as she was taking his health history during a pre-employment examination, "I sure do hope I get this job." The nurse responded on the basis of her knowledge of the company, "I can make one suggestion; that is, before you see Mr. W tomorrow, have your hair shaped and come for your interview in the clothes you'll wear if you do get the job in his office." She said that late the following day a well-dressed young man poked his head into her office and said, "Thanks, nurse. I got the job." She said that for a minute she did not recognize him and then realized that it was the college boy to whom the day before she had suggested that what might be appropriate apparel for going to school was not appropriate for a job interview and who had changed his behavior accordingly.

The nurse has a role in absenteeism control that grows out of the trust that employees have in her. Frequently the workers she sees soon after they come to work are those who would have stayed at home if there had not been a nurse on duty. They come to ask questions; e.g., "My mother said—ask the nurse, do I need to go see the doctor?" or "My throat is sore. Do you have something to make it more comfortable?" These workers, if there had not been a nurse on duty, especially one whom they knew and trusted, would have been absent from work. Others come, for example, to ask, "Please take my blood pressure" or "It is time for my allergy shot." At other times, it is the nurse in the orthopedic physician's office who calls to ask that the occupational

health nurse arrange for a job modification for one of the employees. If he does not have to climb steps, the employee can come back to work. At other times, the social worker from the state mental hospital calls to tell the nurse that Billy G, who has been hospitalized, now is able to be out in the community and to find out when and how he could return to work.

Knowing who to refer, who to involve and exercising judgment, the occupational health nurse proceeds to handle these and many other such situations. Her purpose is twofold: to help keep people working and to help get the job done.

The nurse emphatically and constantly tries to protect and promote the worker's well-being and never forgets that he is the focus for any progress in occupational safety and health.

Miss Nightingale wrote in her book *Notes on Nursing,* "Nursing is not only a service to the sick, it is a service to the well. We have to teach people how to live." This is the role of the occupational health nurse; to fulfill it, she works with other health professionals and makes it the basis of her relationship with the workers.

THE OCCUPATIONAL HEALTH NURSE AND COMMUNITY HEALTH AND MEDICAL CARE RESOURCES

The employees to whom the occupational health nurse gives care are also members of families and citizens of the community. The establishment for which the nurse works is a valued community resource, and the occupational health program that management provides for the employees is one facet of the total community and medical care system. The occupational health nurse frequently functions as a gatekeeper to this total system. She must be out in the community frequently enough to know some of the professional staff of the many community health and welfare agencies. She keeps a current file of resources and the policies that regulate their use.

In addition to being a gatekeeper to the care system, she is a coordinator of care. To do so, she must maintain an open channel of communication between herself, the ill or injured employee and/or his family and the providers of care. She does so for two reasons: to hasten the employee's return to work and to ensure that the several others who are involved in the care know what the others are doing as well as the employee's response.

The occupational health nurse who is known by the community health personnel can be utilized effectively when, for example, the community public health nurse turns to the occupational health nurse when she needs to find the family member who is at work. Also, the occupational health nurse and the public health nurse work together when a worker with a communicable disease, e.g., TB or VD, makes it necessary that a case finding program be put into action.

Occasionally, the occupational health nurse represents occupational health on committees. When she does, she speaks for the workers, expressing, for example, the need for having community mental health services open from 4 to 7 P.M. so that those who work 7 A.M. to 3 P.M. do not have to take time off from their job to attend group therapy sessions.

When the nurse at the emergency room of the local hospital knows the occupational health nurse, she is more likely to call on her. When, for example, the wife of a prominent businessman was critically injured in an automobile accident and taken to the hospital, it was the nurse in the industry where he is employed rather than the switchboard operator who was called and it was the nurse who helped him in the early stages of the crisis.

The community agencies, e.g., cancer, heart and diabetes associations, welcome support from industry. Frequently they

have health education specialists who can provide consultation for the nurse as she develops case finding and health education programs for workers.

The rehabilitation personnel of the official agencies often are involved in trying to find work for a person who has been injured or who has a chronic illness; the occupational health nurse can be involved in trying to match job opening with the special abilities of the person being rehabilitated. This is another example of how wide the occupational health nurse's domain can be if the management for whom she works recognizes that it is important that she be involved in the community as well as in the company's occupational health program. The frequency of this type of involvement on a day-to-day basis is minimal, but over a working lifetime the occupational health nurse's influence can be significant.

THE RECORD SYSTEM

The record system for an occupational health service should provide:

1. Health information in a readily usable form.
2. Competent evidence of matters having legal importance.
3. Data for health program planning and evaluation.

The types, the complexity and the sophistication of an effective record system will be determined by the scope and objectives of the health service and by the size of the work force and the type of establishment the health unit serves.

The forms usually needed are those that permit the recording of data for use in:

1. Establishing the state of health at the time of employment.
2. Establishing the continuing state of health and/or ill health.
3. Maintaining health of the employed adult.
4. Promoting health of the employed adult.
5. Treating the employee with an occupational illness or injury.
6. Rehabilitating the injured or ill worker.
7. Referring the injured or ill worker.

Three words are suggested as guidelines for all who are responsible for developing, for using and for evaluating an occupational health service record system. The first two are *simplicity* and *convenience,* especially in regard to those who maintain the record system and as to the purpose the forms are designed to serve. Equally important is the third word, *why*—Why this record form? Why this report? None should be started or continued past the time that it has a direct bearing on the fulfillment of the purposes of the occupational health program; namely:

1. To identify the health hazards in the work environment and to eliminate or control them.
2. To ensure optimal compatibility between the individual's capabilities and emotional demands of the job.
3. To provide optimal care and rehabilitation for workers who have become ill or injured from work-related causes.

The record system should be built around an employee's health record folder. This folder must be of sturdy construction and expandable. The separate individual record forms are filed in it. It must provide for the safe storage and ready use of the health and work history information and the health data from all examination and/or health assessments, including the results of special tests performed. All injury and illness reports also are filed in this folder.

The American Medical Association's *Guide to the Development of an Industrial Medical Record System*[8] suggests the use of three forms: a history form, a medical examination form and a physical rating form. The first permits the recording of data concerning the person's health and sickness experience. It should

also include the past work experience of the worker. These data can be gathered in several ways. One method is to permit the person to complete a checklist, followed by an interview. It is essential that no misinformation be recorded; hence, the need to discuss the answers given by the person to determine their significance. The key to accurate diagnosis and treatment lies in the adequacy and completeness of the medical history of the worker, and recording it undoubtedly is a professional responsibility. Adequate and complete medical records are essential to a sound occupational health program.

Clearly tagged industrial health folders of those workers who have chronic diseases—heart, diabetes, epilepsy—provide the occupational health personnel handling the record an immediate signal that alerts them to the health problems of the workers. In addition, the folders can be coded so that the occupational health personnel can easily identify workers with possible exposure to radiation, to asbestos, to certain chemicals or to noise, who will need to have interval examinations to ensure that no harm is being done by their work environment.

The physical rating form is the one that is designed to convey to management the occupational health professional recommendation concerning employment and placement.

The individual's health record should be filed in a suitable filing cabinet so as to ensure (1) that only health professionals have access to it, (2) that it is readily available and (3) that it is used.

It is imperative that the nurse interpret to management and to the worker that the information in the folder is used by the health professionals to help the worker to improve and to protect his health, and that only the occupational health professionals have ready access to it.

The nurse must recognize that the record is the property of the employer. The employer has a right to have certain information in a format that is usable. Hence, the need for a physical rating form that permits the transmission of information concerning the worker's state of health so as to permit a decision by the employer as to whether the individual applying for work is employable and/or, if the worker is in a hazardous area, he can continue in it.

Problem-Oriented Medical Records System

A problem-oriented record is essential if the occupational health nurse is to coordinate the care and to assist in the rehabilitation of workers who have had major occupational injuries and/or occupational illnesses requiring care from many different people utilizing a variety of modalities. Workers with problems and the so-called problem employee also require a problem-oriented record and a nursing care plan that permits easy identification of the problems, the priorities that have been established and the results and/or lack of progress in resolving the problems. For example, a worker who is known to have a drinking problem and has accepted membership in Alcoholics Anonymous has an injury and is hospitalized. The health personnel at the hospital needs to know about the drinking problem and his membership in AA. His progress can be impeded unless information concerning his period of sobriety is shared. Others who are known to be heavy drinkers can develop tremors because of the sudden withdrawal of alcohol during a period of hospitalization for an injury.

The major abuse of records is that of nonuse, especially of the information contained in the records, by those who give care to the employees. There is little reason for having the notation on a record "allergic to penicillin" if the person giving care does not have the record before him at the time he treats the employee for an injury; nor can optimal care be given

if, for example, the physical examination form containing information about an elevated interocular tension is in the file and not pulled at the time the worker is seen for the removal of a foreign body from his left eye or for care of a sudden, severe headache.

Another abuse is that of proliferation of forms. For example, someone questions why a worker was gone from his work site for 40 minutes; a new form is designed to show the time that the worker leaves the job, arrives at the health unit, leaves the health unit and returns to work. There is no recognition that "the foreman pass" already in use could be used. There is, in truth, no need for a new form but there is need for better communication between first-line supervision and the health unit.

Moving into an automated record system before you have an effective manual system is a good way to multiply the mistakes. Do not move until you know exactly where you are going. "Computers are big, expensive, fast, dumb, adding machine typewriters." When a system is automated, the record system plan should provide for a sufficiently long period of dual operation to ensure that the information needed to carry on the health service is available to those who need it at the time and place they need it.

Probably the most serious of all abuses of a health service record system is the availability of information concerning an individual's health status recorded on his health record to those who have no right to know. Such abuse limits the usefulness of the occupational health service personnel to both workers and management. Frequently this is the cause of most of the trouble in smaller occupational health units.

Two influences that have complicated the maintenance of the confidential nature of health information are (1) what is needed most is judgment on the part of all people who handle records and reports and (2), equally important, the good sense to "keep quiet." Perhaps the following examples will help to explain these influences. Let us start with a preplacement examination. Mr. S applies for a job at XYZ Company. One of the provisions for employment is that of a standard of health as assessed by a physical examination and certain standard laboratory tests paid for by the company. If Mr. S wants the job, he must have the examination. As a child, he lost the sight of his left eye when he was hit by a snowball containing a stone thrown by a playmate. The information sent to the employment officer by the occupational health unit must contain sufficient information for the safe matching of the man's capabilities with the demands of the job. Hence, a job requiring extremes of depth perception is beyond Mr. S's capabilities. He does meet the requirements for a job opening in the chemistry laboratory.

The health service personnel, usually the physician but increasingly the occupational health nurse, forwards to the employment officer the results of the examination in such a way, usually by code, that permits them to judge if the person's health status is such that they do or do not wish to offer him a position.

Under certain circumstances, and Mr. S's one blind eye is one of them, it is wise for the occupational health unit staff member to interpret to such a prospective employee the job requirements and to secure his cooperation in sharing with the employment officer the nature of his handicap. Adults with special health problems can be placed, but both they and the management personnel who accepts the applicant for employment need to understand the situation. In addition, so does the first-line supervisor if, for example, he is to be able to help a person with Mr. S's handicap to work safely and effectively.

Mr. S is employed. He proves to be a skilled, conscientious worker. Several years later, while at work, he is badly

burned when an explosion occurs, igniting his shirt and causing second and third degree burns of his back and arms. The extent of injury and the possible consequences are facts that his employer is entitled to know, because he pays the bill. This is an injury covered by Workmen's Compensation.

Mr. S's wife also works for the XYZ Company and during his hospitalization she, too, is hospitalized. Her care is covered by the company's paid health insurance program. In order for this to be activated, the surgeon directing her care must complete certain special forms that are handled by the insurance clerk. This clerk must have the type of orientation and continued supervision that ensure that she not only knows her job but also how important it is that even if she knows both Mr. and Mrs. S she not reveal to anyone that Mrs. S has had a hysterectomy.

Clerks assigned these duties must be taught to do their job effectively without divulging the information on the forms they are processing. This kind of handling of information is also required of the health service unit's reception clerk and the secretary, whose work may make them privy to health information concerning employees.

What information, who has a need to know and how much they need to know is extremely difficult to spell out. The employed person increasingly will need to be involved in the decision—especially when related to job placement and to his rehabilitation. The privilege is that of the worker, not the physician or the nurse, and only the employee can give the consent that permits the physician to tell what he knows about a person's health problem when it is not work connected. The occupational health physician and nurse have the responsibility to interpret to a worker who has a chronic disease problem the reasons why it is important that he share certain information concerning his health status with the employer; for example, the epileptic is in a much safer environment if someone knows and is prepared to give him care if the need arises.

No record should be in use that does not have a purpose nor should a new record form be developed unless the following questions can be answered: (1) What information is to be recorded? (2) Why is the information to be recorded? (3) When will this information be used? (4) How will this information be used? (5) Who will use this information? (6) Do we have a form on which this information can be and/or already is being recorded?

The Responsibility of the Occupational Health Nurse for Records

It is essential that the occupational health nurse understands the purpose of the occupational health unit's record system. Records must be so set up and kept as to provide data that (1) protect the worker, (2) protect the employer and (3) protect the health professional (the nurse) who makes the decision, who provides the care and who recorded the information.

The occupational health nurse never gives nursing care that is not recorded. The nurse must recognize that the first time information is recorded this is the original record. She should make every effort to ensure that the information recorded is correct and complete. Scrupulousness and accuracy describe the recording of the nurse's observations, the information she gathers and the care she gives. Her reports provide the basis for determining what needs to be done as well as what has been done—not only by the nurse but by others on the team.

Her actions give evidence that she knows (1) that, to be complete, records must contain the what, the how, the why and the who and (2) that the records will

be useful if there is a question as to the validity of the Workmen's Compensation claim and if some form of arbitration must be carried out.

The occupational health nurse knows the requirements of the Occupational Safety and Health Administration concerning the recording of work-connected injuries and illnesses. She completes these forms and/or supplies the information for the clerk to do so.

NURSING AUDIT.—The purpose of a nursing audit is to evaluate the quality of care as seen through an evaluation of what the person's need for care was and what care was provided to meet this need.

The usual practice is to select a sample; for example, 8–10 records once each month. Review these to determine if the occupational health professionals have recorded (1) why the worker was seen, in sufficient detail that a peer would understand the decision for care, (2) what care was provided, in such detail that a peer would be able to determine if this was appropriate, (3) when the care was provided and by whom and (4) what the plan is for follow-up.

Such an audit provides a measure of the nurse's ability to give care and how effectively she has planned and carried out the care.

THE NURSE AND THE FIRST AID WORKER

The role of the first aid worker in industry is an important one, and every establishment should have one or more such trained persons. It is essential that the persons assigned to be responsible for first aid—in addition to their regular jobs—be prepared to function and hold current first aid certificates from a recognized agency, e.g., American Red Cross or Bureau of Mines. When there are occupational health personnel employed full time, their effectiveness and that of the first aid worker will be increased if both have the opportunity to work together, to get to know each other, to establish respect and to ensure that the first aid worker understands the extent to which he can and is expected to participate.

When there is an established occupational health unit staffed by an occupational health professional, the first aid worker should not provide care for workers. Injured or ill employees should be required to go to the occupational health unit for care. There are two major exceptions: a chemical injury, especially to the eye, and a major medical emergency when, for example, a person is not breathing. Both require immediate and specific attention. The working relationship between the nurse and the first aid worker is critical. The nurse and the first aid worker need to understand their roles and need to work together frequently enough to do so easily. When an emergency arises, the first aid worker usually is the person nearest to the injured and/or ill person. His ability to do cardiac resuscitation or to begin an eye irrigation at the eye fountain immediately following an accidental splash of a chemical into a worker's face is critical if the person is to have optimal care.

The first aid worker can be responsible for providing care for minor industrial injuries when the nurse is not in the occupational health unit. The working relationship between the nurse and the first aid worker must be complementary, not competitive. Depending on the size and layout of the occupational health unit, it is suggested that a first aid dressing table be set up with equipment, supplies and medications that the first aid worker knows how to use. Standard procedures should be developed that are the basis for the care provided by the first aid worker. These procedures should outline the care to be provided, when the employee is to be seen by the nurse, how and when re-

ferrals are to be made by the first aid worker to the physician and when the injured or ill person is to be taken to the emergency room of the hospital.

All care provided by the first aid worker is recorded. Before this information is put into the employee record, the nurse should review and discuss each situation with the first aider and, when indicated, should recall the injured or ill worker to the occupational health unit to reassess, to provide care and/or to refer. When competent first aiders are available and when it has been established that the nurse may request their help, it is possible for the nurse to arrange to leave the health unit for short periods of time. She can be out in the work area or attend a health-related community committee meeting or attend a lecture. The first aid worker can be left in charge of the health unit, with a notice on the occupational health unit door as to how he can be called when needed. In a busy health unit, the first aid worker can be assigned to actually be present in the health unit when the nurse is away. Then the first aid worker follows the same first aid standard procedures and provides care for the minor injuries or illnesses that occur, makes appointments for the employees to see the nurse when she returns and/or makes arrangements for workers with problems to be taken to the physician's office or to the hospital.

The disaster plan for the establishment should include channels of communication between the nurse, the physician and the first aid workers. This plan must be written and the personnel involved must know what is expected of them. Practice sessions make it possible for skills to be developed and working relationships established so that the personnel involved in making the disaster plan operational work together smoothly if and when it must be put into operation. In addition, it is wise to establish a working relationship with the community hospitals, the police and fire departments and ambulance services so that if, for some reason, their help is required it can be secured quickly.

It is well to remember when establishing a disaster plan that if the first aid workers are also the establishment's guards or fire fighters, they may be so busy with their first responsibility that they cannot help with first aid. Hence, it is wise to have some prepared first aid workers who are other than guards or security personnel.

The nurse should be competent to teach first aid and should have continuing education sessions for the first aiders, especially those who provide care in her absence, so as to ensure their ability to function and to develop a working relationship that is mutually satisfactory and safe.

THE NURSE'S RESPONSIBILITY FOR THE MANAGEMENT OF THE OCCUPATIONAL HEALTH UNIT

The provision of adequate personnel, space, equipment and supplies for the occupational health program is a responsibility of management. Helping management to know what is required is a responsibility of the health professionals who have engaged to plan, conduct and evaluate the occupational health services. The safety and the comfort of the workers who are cared for in the unit are the primary concerns, as are the health and safety of the health unit staff.

When the nurse is the only full-time staff, she should share the responsibility with someone in management, as would the full-time medical director, nursing service director or occupational health unit administrator of a large establishment for planning the program, for determining what space, what equipment,

supplies and what personnel are required, as well as for the development of the annual occupational health unit budget.[12]

There is need for a plan for purchasing that ensures that there is an adequate and current supply of drugs and dressings and that the equipment is checked routinely to determine that it is always ready for use. Routine checks ensure that the oxygen supply and other emergency equipment is adequate and in operating condition and that the audiometer has been calibrated and has had routine preventive maintenance. The drugs and solutions inventory should be maintained as required by law. There should be a supply for normal use and an extra margin to cover that required by the disaster plan. Supplies should be ordered in quantities for the best price but not to exceed storage resources and for use that is within the safe time period of the drugs and supplies. Modifications of drug orders, supplies and treatment modalities must be approved by the physician. The appropriate changes in the standard procedures in the occupational health unit and the occupational health nursing policy and procedure manual also must be made.

Day-by-day maintenance of the health unit includes housekeeping tasks carried out by maintenance personnel. Management needs to recognize that what is not supervised deteriorates. The nurse can provide such supervision if she and the director of the Maintenance Department and/or the janitorial service can communicate. A system for routine inspections of the occupational health unit's structure, equipment and ambulances for evidence of deterioration should be carried out as part of the inspection program of the establishment. The frequency of wall and window washing should be established and automatically carried out by appropriate personnel, either from within the establishment or from a firm under contract to do so.

It is wise to establish a safe storage place for chemicals and drugs used within the occupational health unit. Fire control measures and a plan for safe and efficient disposition of trash, sharp objects, used dressings and used disposable needles and syringes are required.

At the time of the annual report and/or when the budget is being prepared, the justification and projected costs of major redecorating of the occupational health unit and for the purchase of new equipment and/or the replacement of old equipment should be presented. In this way, the costs and the need for the expenditures can be considered and included in the budget.

Another item that should be prepared for the budget is that associated with in-service education for the occupational health unit's personnel. When the occupational health nurse works as the establishment's only full-time professional, this budget item will need to reflect not only the costs of tuition and perhaps travel but also the salary of a relief nurse. Increasingly, management and the occupational health nurse must plan for continuing education, since professional organizations and the state licensing agency require evidence that the nurse has kept her knowledge and skills current. The legal implications of this are stated in the March 7, 1959 issue of the *Journal of the American Medical Association:* The nurse "must meet the standard of learning skill and care to which nurses practicing that profession in the community are held."[9] It can be anticipated that this standard will continue to increase, and occupational health nurses must keep pace.

The first report of the Nursing Sub-Committee of the Permanent Commis-

sion and International Association on Occupational Health, published in 1969, was based on the data from a questionnaire circulated to 70 countries and on the expertise of the Sub-Committee members. This report speaks to the nurse's contribution to the health of the worker and says, in part, that "It is not possible to make universally applicable statements about what should or should not be the contribution the occupational health nurse makes to the promotion of the health of the worker. Yet, two general principles emerge. The occupational health nurse must assess the priorities and the available and potential resources in the situation in which she works, and plan her work within these constraints to provide the maximum possible service. Secondly, she must take note of the services already adequately provided by other specialized workers and plan her work in cooperation with them to provide as comprehensive a service as circumstances allow and to avoid duplication of service."

The central core of the occupational health nurse's work is worker health. She can and does function in all of the five stages of a complete health service. In addition and in support of these, the nurse can and does carry responsibilities for the administration of the health unit. Recognition by her employer of how great and how varied can be the nurse's contribution to worker health is essential, as is his making possible her ready access to the other specialized occupational health personnel. These two factors plus the nurse's ability to plan and to provide care for people who are not patients but employees can result in more and better care for workers, better utilization of the limited supply of highly specialized occupational health personnel, more involvement of the employees in activities related to their own health and safety and fewer health and safety problems in the work area—in summary, in healthy workers kept healthy.

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Occupational Medicine

PRINCIPLES AND PRACTICAL APPLICATIONS

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