

Managing Occupational Health Information

An Organizational Approach

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Regardless of where they work, occupational health nurses may be in a position to manage one of the most important resources in the enterprise. How that resource is managed may make the difference in how successful the occupational health nurse, the employee health service, and perhaps, even the company is or remains. What is this valuable resource: Information. What type of information might an occupational health nurse manage? Information related to the health and safety of employees, the company's legal requirements to maintain the health of the work force, and factors in the internal or external environment that may have a negative affect on employee well being and company productivity. Information the occupational health nurse receives, generates, maintains, distributes, and uses may be considered a key asset. In the role as "chief health information officer," the occupational health nurse has primary responsibility for managing this asset, but also may acquire the power and leverage accompanying this responsibility.

Information is a valuable "resource" to the efficient operation of any organization. To the occupational health nurse, this resource provides the foundation on which practice is established. As with any other resource, its wise use may determine success or failure. To the business, this resource may help address the major challenges facing companies in this century. Those challenges include competition, cost, compliance, and customer satisfaction.

The efficient use of health related information may allow business leaders to contain costs associated with

employee health care expenses, lost work time, decreases in employee productivity, and programmatic expenses related to regulatory compliance with health related regulations promulgated by multiple agencies. In consultation with the occupational health nurse, companies are able to design more appropriate benefit packages, implement more effective injury prevention programs, institute more appropriate surveillance strategies, and ultimately, promote the health and safety of workers. As a result of cost savings in these areas, companies are better able to remain competitive in a global market, customers are more satisfied with products and services, and employees positively perceive the value of the health related benefits afforded them.

ROLE OF THE OCCUPATIONAL HEALTH NURSE AS THE "CHIEF HEALTH INFORMATION OFFICER"

Collection of sufficient amounts of health and safety information is usually not problematic for occupational health nurses. In fact, there is frequently an abundance of information and the larger challenge is to decide which information is critical and which is extraneous. When deciding whether information is "critical," the following questions should be asked:

- Does it provide a better understanding of the health needs of client(s)?
- Will it enable the service population to protect and promote its own health and safety?
- Will it contribute to more informed decision making?
- Will it allow wise use of other resources, such as time, money, and labor?
- Is it critical to the overall efficiency of the organization?
- Will it help to support the vision and mission of the company?

Information collected or received by the occupational health nurse may be considered "input" and arrives in

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many formats. Types of information input include forms, questionnaires, applications, accident reports, test results, advertisements, personal letters, announcements, requests for service, bills and invoices, and treatment reports. The ways in which information arrives are also diverse and numerous. Some of the mechanisms of delivery include electronic mail (e-mail), inter-company mail, postal mail, telephone messages, facsimile (fax), and hand delivery.

Maintenance of health information is a key responsibility of the occupational health nurse, and one fraught with logistical and professional challenges. Securing appropriate storage facilities requires knowledge of the level of security and protection required for maintenance and preservation of health information documentation. It also requires knowledge about retention requirements for various types of information, such as training records, exposure reports, employee health records, and Occupational Safety and Health Administration (OSHA) logs. Efficient maintenance of health and safety information, whether it is in hard copy or electronic format, ensures it is safeguarded from unauthorized use, accessible when required, and protected from physical destruction.

Dissemination of health information is predicated on the recipient's role and "need to know." The occupational health nurse is bound by many factors when managing the dissemination of health information, including the ethical responsibility, as outlined in the American Association of Occupational Health Nurses [AAOHN] Advisory: Confidentiality of Employee Health Information (AAOHN, 2002). It is important to protect sensitive information and to comply with the legal requirements of regulations such as the Health Insurance Portability and Accountability Act (U.S. Department of Health and Human Services, 2002), the Americans with Disabilities Act (1993), and the Occupational Safety and Health Act (OSH Act) Access to Employee Exposure and Medical Records Standard (29 C.F.R. 1910.1020) (1996).

Disseminated information may be considered "output" and takes as many forms and methods of delivery as information "input." The occupational health nurse must decide not only who is a qualified recipient of information, but also the appropriate mechanism for delivery. Information outputs of the employee health service may include reports, notifications, logs, policies, protocols, forms, budgets, financial statements, training and educational materials, and letters.

ESTABLISHING AN INFORMATION MANAGEMENT PROGRAM

A proficient occupational health nurse determines appropriate information management systems and coordinates resources to facilitate their use (White, 1999). Given the multitude and importance of the many tasks involved in managing health and safety information, development of a formal program may be appropriate. Designing a program addressing all aspects, responsibilities, and requirements related to managing health and safety information establishes a framework and a foundation from which to operate. It also ensures that systematic review occurs on a scheduled basis and the need for resources is addressed.

An example of an Information Management Program is provided in the Table.

TOOLS OF THE TRADE

An occupational health nurse must take full advantage of all tools and resources available to assist in managing the daily volume and complexity of health information. Identifying and strategically using technology resources can make the occupational health nurse's responsibility much easier (Barthel, 1998). Among the tools considered integral to the information management strategy are electronic health record systems, e-mail, the intranet, the Internet, telephone systems, fax systems, scanning devices and programs, mail delivery systems, and office support systems. The thoughtful application of these tools, individually or in combination, can increase efficiency and reduce required resources.

Traditionally, the occupational health nurse has made good use of manual systems such as the telephone; fax; mail; and software including word processing, presentation, and spreadsheet programs. However, in the past decade, occupational health nurses have realized the inherent value in more sophisticated communication and information management products and have sought to incorporate them into their professional practice.

Electronic Health Record Systems

Software programs supporting employee health records management provide a wide range of functionality and are available in many models, price ranges, and sizes. Some support a single function, such as case management or OSHA recordkeeping. Others are comprehensive and offer modules supporting multiple activities, including health surveillance monitoring, physical evaluation, clinical testing, environmental monitoring, training documentation, fit testing, and injury and illness assessment and treatment. Some of the desirable features of these systems include:

- Data sharing between modules to eliminate redundant data entry.
- Interfacing with internal organizations, such as human resources, for the direct input of demographic information.
- Interfacing with external organizations, such as laboratories and other health care service providers.
- Direct input of results from laboratory or clinical testing equipment, such as spirometers or audiometers.
- Generation of official reports acceptable by regulatory agencies.
- Maintaining records for individual and groups of employees by workplace exposure.
- Trending and tracking capability to identify health or safety issues.
- Linkages to communication systems to allow for e-mail or fax notifications or reporting.
- Graphical capability to produce visually appealing and informative reports.
- Standard and ad hoc reporting supporting correlation of many variables and factors.

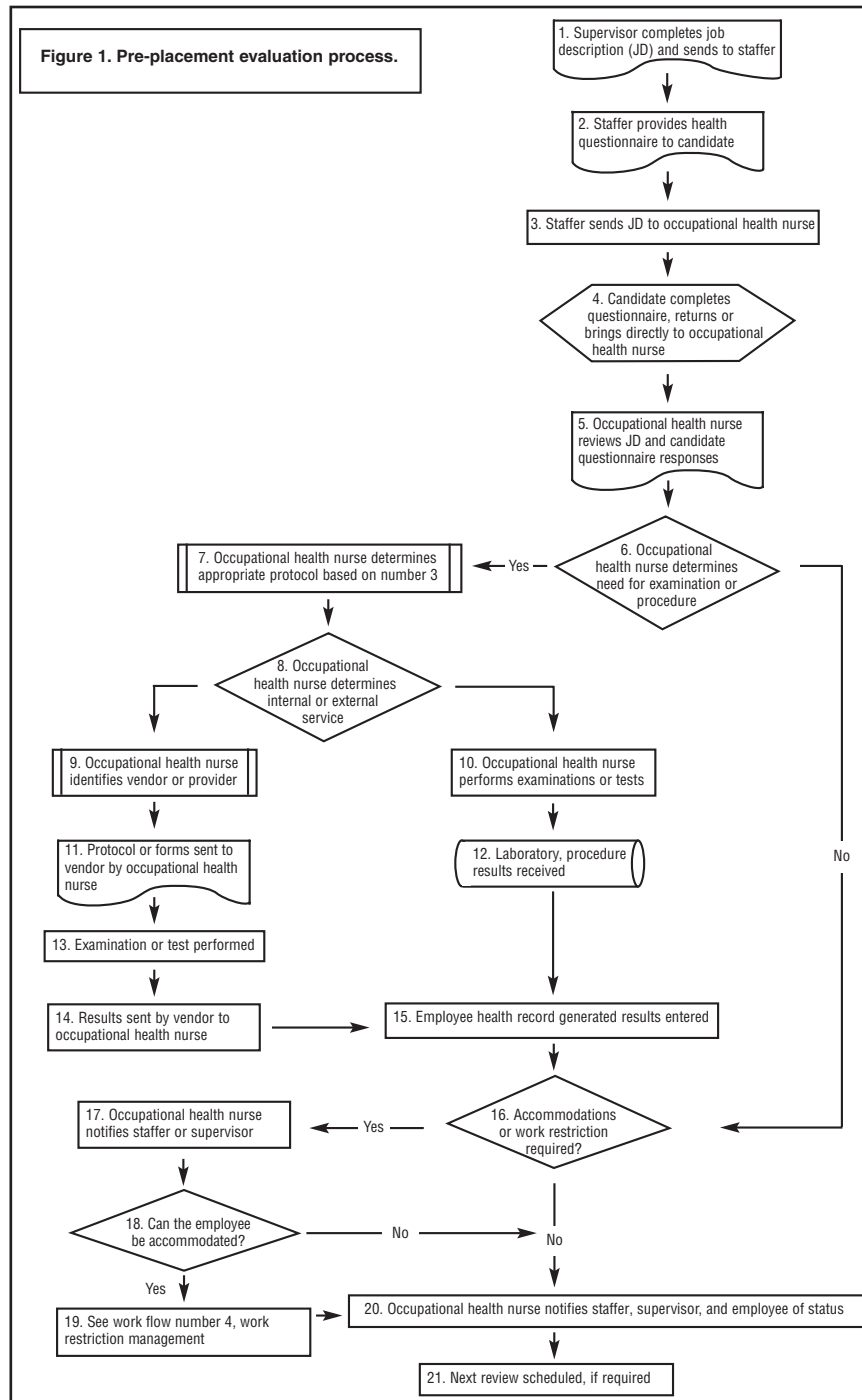
Electronic health information systems are available in models that may be installed on a single computer or on a server that allows access by multiple users. Several

Table

Information Management Program

- | | |
|--|---|
| <p>I. Purpose (examples of statements of purpose):</p> <ul style="list-style-type: none"> ● The purpose of the Information Management Program of the XYZ Company is to ensure the efficient collection, maintenance, and use of employee health and safety information, and to facilitate compliance with all related guidelines and regulations. ● The purpose of the XYZ Company Health Information Management Program is to ensure a comprehensive, methodical approach to the collection, maintenance, and use of information related to the health and safety of employees and the work environment. <p>II. Objectives (examples of measurable objectives):</p> <ul style="list-style-type: none"> ● To reduce the time spent by professional staff on documentation by one half from the date of program implementation. ● To ensure compliance with the XYZ Company policy on confidentiality of personally identifiable health information. ● To increase client satisfaction with communications received from occupational health services by 50%. ● To maintain zero Occupational Safety and Health Administration (OSHA) citations related to record keeping. ● To establish and maintain real time data interchange with company departments, including benefits, industrial hygiene, and human resources by January, 200X. <p>III. Responsibilities:</p> <p>A. The occupational health nurse serves as program manager and is responsible to:</p> <ul style="list-style-type: none"> ● Identify critical elements of information from both internal and external sources. ● Establish a recordkeeping system that ensures confidentiality of health information. ● Develop protocols and procedures for ensuring access to records by employees and designated representatives. ● Produce and disseminate aggregate reports establishing the basis for informed decision making, etc. <p>B. Managers and supervisors are responsible to:</p> <ul style="list-style-type: none"> ● Ensure employees have access to documents outlining their rights to personal and exposure health information collected and maintained by the employer. ● Supply employees with the appropriate forms to report work related illnesses and injuries. ● Provide the occupational health nurse with documentation of the physical requirements of jobs. ● Use reports supplied by the occupational health nurse to identify actual or potential health risks in the work force, etc. <p>C. Employees are responsible to:</p> <ul style="list-style-type: none"> ● Use the appropriate XYZ Company forms to report work related illnesses and injuries. ● Access and read regular and special editions of the employee health service newsletter or advisories. ● Notify the occupational health nurse when changes are made in their jobs, tasks, or technology used. | <ul style="list-style-type: none"> ● Participate in information gathering initiatives or health surveillance activities of the occupational health nurse. <p>D. The human resources organization is responsible to:</p> <ul style="list-style-type: none"> ● Notify the occupational health nurse via electronic-mail when job offers have been made to job candidates. ● Initiate demographic data entry for all new employees. ● Provide the appropriate forms or intranet access to job candidates to complete pre-placement health information. ● Notify the occupational health nurse of all employees who have been absent for 3 or more days. ● Download and distribute the appropriate forms from the occupational health services website for distribution to all employees seeking Family Medical Leave Act (FMLA) leave, etc. <p>IV. Program components:</p> <p>A. Employee health records</p> <ul style="list-style-type: none"> ● Hard copy documentation ● Electronic surveillance records ● Employee Assistance Program records ● Health promotion participation documentation <p>B. Health and safety information distribution</p> <ul style="list-style-type: none"> ● Newsletter ● Employee health service website ● 24 hour" hotline" for reporting on job injuries ● Online ergonomics training <p>C. Reports:</p> <ul style="list-style-type: none"> ● Monthly illness and injury statistical report ● Quarterly absence and workers' compensation case management report ● Annual OSHA log report ● Monthly financial report ● Weekly, monthly, quarterly, and annual occupational health services activity report ● Individual examination or clinical testing reports ● Aggregate exposure reports <p>D. Resources required:</p> <ul style="list-style-type: none"> ● Electronic health information system version upgrades ● Hardware upgrades ● Scanning and imaging expenses ● User training and retraining ● Technical manuals and materials ● Website creation and maintenance ● Newsletter creation, printing, and distribution ● Office systems updates ● Telephone and facsimile services and upgrades <p>E. Evaluation:</p> <ul style="list-style-type: none"> ● Annual review of objectives and metrics ● Annual client satisfaction survey ● Monthly OSHA compliance review <p>V. Applicable standards:</p> <ul style="list-style-type: none"> ● OSHA C.F.R. 19.1020 ● Americans with Disabilities Act ● Health Insurance Portability and Accountability Act ● XYZ Company confidentiality policy |
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Figure 1. Pre-placement evaluation process.



products are now available in web enabled versions. This means the program software is actually on a website maintained by the developer and available to many customers. Most frequently, the data collected by the customer resides locally. The benefit of this type of application is the vendor can make modifications or install upgrades to the software from a single site.

Selection of an electronic health information system or a "computer based patient record" (Institute of Medicine, 2000) can be confusing and labor intensive. A coordinated approach including input from all potential users

and representatives of groups with whom the system will interface is required. The first decision made by this group must be to identify the processes to automate. This decision is predicated on the need for improvement or operational efficiency that can be gained.

Work flow processing or engineering using diagramming is useful in identifying the functionality required to support the practice of users and the goals of the program. Work flow processing can be performed using a commercial software product such as Visio (Microsoft, Redmond, WA), presentation software such as Power-Point (Microsoft, Redmond, WA), or manually by charting the steps in a given process. An example is pre-placement evaluation, including the source and the delivery point for all information, the interface of all participants in the process, the documents or elements of information required, and the mechanism for transferring information (see Figure 1).

At the conclusion of diagramming, required functionality and all major processes and procedures for which documentation is automated become evident. In the example diagram, elements of information identified are a written job description; a health questionnaire; protocol; list of vendors; examination form; laboratory results; employee health record; and notifications for staff, supervisor, and employee. Functionality required includes the ability to:

- Generate a questionnaire.
- Capture questionnaire responses.
- Receive and review documents, such as a job description.
- Access pre-developed protocols.
- Generate and transmit forms to vendors and laboratory.
- Receive and enter formatted laboratory and examination results.
- Generate a new health record.
- Generate and transmit internal and external notices.
- Schedule appointments.

For this example process, interfaces are necessary with the staffing department, the candidate for employment, vendors, the laboratory, and the supervisor.

This exercise minimizes the possibility of purchasing software that is not a good "fit" with the organization,

requires major customizing, or has non-useful features and functionality. As an added benefit, work flow diagrams may be used later for developing protocols and as visual teaching aids for new staff.

Health Information System Selection

After the list of requirements and functionality has been generated, it may be transferred to a system review grid (Salazar, 2001). Use of a “score card” enables the health information selection team to objectively evaluate products and vendors. Involvement of internal information technology (IT) organizations, where they are available, will ensure ongoing technical support and assure the selected product is compatible with other company hardware and software.

Following the selection of an appropriate system, careful planning and training facilitates a smooth transition from a paper and pencil record to an electronic format (Amann, 1999). Although the evolution from management of “tangible” to “intangible” elements of information may require a philosophical shift for many occupational health nurses, much can be gained in terms of increased usefulness of valuable health and safety data. Benefits of an electronic health information program include increased staff efficiency, legible entries, access by multiple authorized users, reduced potential for lost or misfiled records, and the ability to operate remotely (Mangiameli, 2000).

The Internet and Intranets

With the availability of the Internet for personal and commercial use came the opportunity for occupational health nurses to gain and share information in new and efficient ways. Vast repositories are available to occupational health nurses for accessing information related to emerging environmental, societal, and community health issues; governmental regulations; and professional nursing issues. Historically, occupational health nurses have relied on information from peers, information gained at conferences, and their own collection of materials as resources to support practice decisions and program management (Lathey, 2001).

Increased responsibility and expanded roles make it imperative for occupational health nurses to seek the most current and credible information available. The Internet provides direct linkage to documents, reports, and materials from sources such as the National Library of Medicine, OSHA, Agency for Toxic Substances and Disease Registry, and others as listed in the *AAOHN Journal* (Campbell, 2001) and on the AAOHN website at <http://www.aaohn.org>. The Internet also affords the opportunity for occupational health nurses to share information with other professionals by using mail lists and list serves.

Using the same technology as the Internet, intranets may be the most unrecognized resource available to occupational health nurses and employee health services. An intranet is created when an organization or company links computers and servers together across offices, departments, divisions, states, and sometimes even coun-

XYZ Company Occupational Health Services	
Health Related Policies	<ul style="list-style-type: none"> February is National Heart Month [linked to American Heart Association] Sign up now for Company Aids Walk [linked to PDF form to complete and submit] Carbon Monoxide—A “Winter Worry” [linked to a page describing the issue] Tell us what you think! Click here to complete an Annual Customer Service Survey Smoking Cessation Program to begin soon! [link to brochure about the program] Staff News: Occupational Health Nurse Margaret A. earns certification!
Forms	
Employee Assistance Program	
Web Links	
Staff	
<p><i>Privacy Statement: This website is provided for the information and convenience of the employees of XYZ Company only. Any personally identifiable information collected here will be held in strict confidence and will not be shared with anyone outside of the occupational health services department without the written permission of the employee. This site is linked to other sites believed to contain useful information for employees. The accuracy and currency of the contents of those sites is not guaranteed or endorsed. Information from this or any linked site is not a substitute for the professional opinion or care of licensed health care providers and must not be construed as such.</i></p>	
Contact Us [link to occupational health services e-mail]	Site Last Updated: [date]

Figure 2. Example of health services website with links (links are explained in brackets).

tries. Unlike the Internet, these networks of people and machines and the information they share are protected from unauthorized access by “firewalls.”

Many occupational health nurses use intranets to communicate with employees, supervisors, and representatives of other departments. By establishing a presence, or website, on the intranet, newsletters can be distributed, surveys delivered, training administered, program sign ups conducted, questions answered, forms made available, and policies and procedures for accessing health services communicated. An employee health service website can also provide a “gateway” to the Internet and enable employees to link directly to sites such as the American Red Cross, the American Heart Association, Healthfinder, and the Centers for Disease Control and Prevention.

By searching out sources of accurate information and facilitating the connection by employees, occupational health nurses enable the service population to access and use resources for improving health. Figure 2 is an illustration of an employee health service website in which each “box” is linked to another page, form, document, or Internet site that employees can access by clicking on the link. Embedding e-mail functionality allows employees to submit responses, complete surveys, or ask questions directly from the webpage.

Scanning and Imaging Tools

Often, hard copy records and documents exist or are received and must be retained. Examples of this type of information include archived health records, physician reports, test results, insurance forms, and letters. The use

Steps for Recovering from Information Systems Interruption

- Designate individuals responsible for notifications, equipment testing, and damage assessment.
- Access database backup materials, tapes, and disks, from off site storage location.
- Establish a temporary site of operations, if necessary.
- Secure replacement hardware and configure it to resume operations as soon as is feasible.
- Install health information system software on backup equipment.
- Test functionality and limit interfaces to those deemed critical.
- Audit files to ensure complete recovery and data integrity.

of scanners allows occupational health nurses to capture an image of the document and save it to an employee's record, to other files, or to storage discs or tapes. Several types of imaging technology are available, including some that allow recognition, modification, or addition of text. Scanning may be an appropriate solution for an employee health service with large volumes of records for retired employees or program participation documentation.

INTEGRATING TOOLS OF THE TRADE

The tools required to support practice are as diverse and as numerous as the tasks and roles fulfilled by the occupational health nurse. No single information management tool fulfills the requirements of a comprehensive Information Management Program. Integration of available systems and programs allows for creative and flexible application of functionality and enhances the usefulness of any single program. For example, when integrated with a word processing program and e-mail, the electronic health record system allows the occupational health nurse to create notifications, test reports, or letters, and to disseminate them to a recipient's electronic mail address.

Similarly, when systems within an organization are integrated, data are shared and input from multiple departments or storage on more than one system is not required. One prime example of a valuable integration is the integration of the employee health record with the human resources database. This allows demographic information input and updating by a human resources staff member, and sometimes, even by an employee. This information is then "mapped" to coordinating fields in other systems such as the payroll, benefits, and employee health service departments. Integration may also be useful for "routing" reports or forms from one department to another—such as an accident report with components to be completed by the occupational health nurse, safety professional, industrial hygienist, and the facilities manager. Moving documents electronically, either sequentially or collectively, decreases time spent and improves communication.

ENSURING CONFIDENTIALITY AND INTEGRITY OF HEALTH INFORMATION

When planning for the systematic management of health and safety information, it is imperative for the occupational health nurse to know and understand the boundaries and responsibilities for ensuring the confidentiality of sensitive information. The federal government and most states provide statutory protection of health records. A number of agencies have developed standards for managing health information (American Health Information Management Association, 1999).

When implementing technological changes requiring electronic collection, maintenance, and distribution of personal information, precautions must be taken to prevent inappropriate access or disclosure. Traditionally, employee health records were kept confidential by placing them in separate folders in locked cabinets in locked record rooms. These practices kept records private; however, they did little to foster sharing of critical information with providers caring for mobile workers or among departments within the company with a legitimate need to know certain aspects of the record.

Multiple layers of passwords protect the confidentiality of electronic records. The layers of passwords are based on role and function, encoding or encryption during transmission, and designating "privileges" for users based on geographic or departmental status, combined with limiting the ability to create, view, or modify a record as appropriate.

Integrity, on the other hand, refers to the "condition" or the physical security of a record. Integrity of hard copy records may be threatened by fire, floods, loss, fading, and improper or unintelligible written entries. The integrity of electronic records is protected by (Amann, 1999):

- Delivering effective user training.
- Requiring complete and appropriate data entry.
- Ensuring successful transmission of data from point to point.
- Establishing audit trails.
- Implementing automated backups of the databases.
- Establishing lockout procedures that prevent modification of a record after a designated period of time.

Establishing a statement, guidelines, or a policy at an organizational level protects both confidentiality and integrity. This document should clearly articulate the sensitivity of health information and the penalties for its misuse. Many companies include this type of directive in the policy manual or in the employee handbook.

PREPARING FOR THE "UNTHINKABLE"

Any event causing a significant disruption in information system capabilities poses a definite threat to the security of records and introduces the possibility of great loss of valuable data. People, mechanical failure, power outages, and environmental or natural disasters may disrupt an organization's operations. Occupational health nurses responsible for managing information systems or the Information Management Program must consider the potential need for disaster recovery and promote establishing a plan for recovering from information systems inter-

ruption. The central theme of a recovery plan is to minimize the affect of the event on operations and restore information management capabilities to a pre-disaster state as soon as possible. The Sidebar lists steps for recovering from an information systems interruption.

In addition to ensuring the creation of a recovery plan, occupational health nurses are responsible to:

- Communicate detailed description of the plan to all staff members.
- Require that passwords are changed regularly and that a list of authorized users is maintained.
- Ensure regular backups occur and materials are kept separate from the facility.
- Conduct disaster drills on a regular basis.
- Evaluate the plan regularly in light of new risks or newly discovered threats to information management systems.

SUMMARY

The vital nature of health and safety information and the need for employers to collect, maintain, and use it wisely all provide excellent opportunities for occupational health nurses to demonstrate the value they bring to an organization. However, to capitalize on this opportunity, new and more efficient methods for managing expanded roles and responsibilities must be used. In some cases, this necessitates gaining new understanding and capabilities. Many resources are available to occupational health professionals who pursue the knowledge and skills to address the needs of clients and employers in the 21st century (Institute of Medicine, 2000). Occupational health nurses must assess their current abilities and seek the education and training required to develop the necessary competencies (Cox, 2001).

REFERENCES

- Amann, M. (1999). Information management: Computer resources for the occupational and environmental health nurse. *AAOHN Journal*, 47(12), 574-584.
- American Association of Occupational Health Nurses. (2002). *AAOHN Position Statement: Confidentiality of Employee Health Information*. Retrieved February 19, 2003, from <http://www.aaohn.org/practice/positions/confidentiality.cfm>
- American Health Information Management Association. (1999). *AHIMA guidelines*. Retrieved, February 19, 2002, from <http://ahima.org/info-center/guidelines/>
- Americans with Disabilities Act of 1990, 42 U.S.C.A. § 12101 *et seq.* (West 1993).
- Barthel, C., Kalina, C., & Fitko, J. (1998). Business process design: Securing computerized health information files. *AAOHN Journal*, 46(12), 581-586.
- Campbell, K., & Ebert, R. (2001). Conducting research on the Internet—Part II. *AAOHN Journal*, 49(6), 273-275.
- Cox, A., & Williamson, G. (2001). Job security for occupational health and safety professionals in the 21st century. *AAOHN Journal*, 49(4), 169-170.

IN SUMMARY

Managing Occupational Health Information

An Organizational Approach

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- 1 The health information the occupational health nurse receives, generates, maintains, distributes, and uses is an important "asset" to both professional practice and the company.
- 2 Efficient maintenance of health and safety information, whether it is in hard copy or electronic format, ensures it is safeguarded from unauthorized use, accessible when required, and protected from physical destruction.
- 3 Establishing an Information Management Program is an organizational approach to ensuring policies are set, resources are dedicated, and evaluation criteria are established.
- 4 Assuming the role of "chief health information officer" may require occupational health nurses to identify their own skill gaps and pursue the knowledge and abilities necessary to develop mechanisms for efficient management and use of the valuable information to which they have access.

- Institute of Medicine. (2000). *Safe work in the 21st century: Education and training needs for the next decade's occupational safety and health personnel*. Washington, DC: National Academy Press
- Lathey, J., & Hodge, M. (2001) Information seeking behavior of occupational health nurses: How nurses keep current with health information. *AAOHN Journal*, 49(2), 87-95.
- Mangiameli, R., & Boseman, J. (2000) Information technology: Passport to the future. *AAOHN Journal*, 48(5), 221-228.
- Occupational Safety and Health Act. (1996). Access to employee exposure and medical records standard (29 C.F.R. 1910.1020). Retrieved January 24, 2002, from http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10027&p_text_version=FALSE
- Salazar, M.K. (Ed.). (2001). Core curriculum for occupational and environmental health nursing (2nd ed., pp. 171-187). Philadelphia: W.B. Saunders.
- U.S. Department of Health and Human Services. (2002). Health Insurance Portability and Accountability Act. Retrieved February 19, 2003, from <http://www.hhs.gov/ocr/hipaa/>
- White, K., Cox, A., & Williamson, G. (1999). Competencies in occupational and environmental health nursing: Practice in the new millennium. *AAOHN Journal*, 47(12), 552-568.

Bloodborne Pathogens: What You Need to Know—Part I

This issue of the AAOHN JOURNAL contains a Continuing Education Module on "Bloodborne pathogens: What You Need to Know—Part I." 1 contact hour of continuing education credit will be awarded by AAOHN upon successful completion of the posttest and evaluation.

A certificate will be awarded and the scored test will be returned when the following requirements are met by the participant: (1) The completed answer sheet is received at AAOHN on or before December 31, 2003; (2) A score of 70% (7 correct answers) is achieved by the participant; (3) The answer sheet is accompanied by a \$10.00 processing fee. Expect up to 6 weeks for delivery of the certificate.

Upon completion of this lesson, the occupational health nurse will be able to:

1. Outline the historical milestones in the regulation of bloodborne pathogens in the workplace.
2. Describe the methods of exposure to bloodborne pathogens in health care workers.
3. Identify the risks, risk factors, and prevalence of transmission in health care workers.

AAOHN is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. California provider number CEP9283. Louisiana provider number LSBN3.

Contact hour credits received for successful completion of the posttest and evaluation may be used for relicensure, certification, or recertification.

Directions: Circle the letter of the best answer on the answer sheet provided. (Note: You may submit a photocopy for processing.)

1. According to the American Nurses Association (ANA) (1999), approximately _____ health-care workers contract a serious infection from contaminated sharps annually.

- A. 500.
- B. 800.
- C. 1000.
- D. 3,000.

2. The occupational health nurse recommends which of the following as a secondary preventive intervention for bloodborne pathogens?

- A. Providing personal protective equipment.
- B. Using detailed post-exposure management programs.
- C. Mandating standard precautions.
- D. Using proper hand washing and housekeeping methods.

3. Which of the following authorized the Occupational Safety and Health Administration to update the bloodborne pathogen standard to improve needle safety and strengthen exposure prevention programs?

- A. Needlestick Safety and Prevention Act.
- B. The OSHA Bloodborne Pathogen Standard.
- C. The Centers for Disease Control and Prevention (CDC) Guidelines on Post-exposure.
- D. The OSHA Compliance Directive.

4. An occupational health nurse consults this guideline as the definitive authority for clinical management and treatment of bloodborne pathogen exposures:

- A. The OSHA Bloodborne Pathogen Standard.
- B. The OSHA Compliance Directive.
- C. The CDC Provisional Guidelines.
- D. The CDC Guidelines on Post-exposure.

5. In the health care setting, the most frequent mode of transmission of bloodborne pathogens is through contaminated needlesticks and:

- A. Splashes on mucous membranes.
- B. Exposure to nonintact skin.

- C. Cuts with a sharp object.
- D. Human bites.

6. The findings of prospective studies of health care workers indicate the average risk of infection from a percutaneous injury from a known HIV positive source is:

- A. 0.09%.
- B. 0.3%.
- C. 7%.
- D. 30%.

7. What is the average risk of hepatitis B in an unvaccinated health care worker?

- A. 0.3%.
- B. 3%.
- C. 30%.
- D. 60%.

8. According to the CDC statistics (2002b), which group of health care workers had the highest number of documented seroconversions to HIV from a known occupational exposure?

- A. Nurses.
- B. Clinical lab technicians.
- C. Physicians.
- D. Surgical technicians.

9. Compared to the general population, health care workers have this risk of contracting hepatitis B:

- A. Three to five times greater.
- B. Seven to ten times greater.
- C. Two times less.
- D. Five times less.

10. Research conducted by the CDC (1995) showed that all but which of the following factors increases the risk of HIV transmission after a percutaneous exposure:

- A. Deep injury.
- B. Not wearing gloves.
- C. Visible blood on the device.
- D. Device placed directly in a vein or artery.

ANSWER SHEET

Continuing Education Module

Bloodborne Pathogens

What You Need to Know—Part I

January 2003

(Goal: To gain ideas and strategies to enhance personal and professional growth in occupational health nursing.)

Mark one answer only!

(You may submit a photocopy of the answer sheet for processing.)

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D

6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D

EVALUATION (must be completed to obtain credit)

Please use the scale below to evaluate this continuing education module.

	4 - To a great extent	3 - To some extent	2 - To little extent	1 - To no extent
1. As a result of completing this module, I am able to:				
A. Outline the historical milestones in the regulation of bloodborne pathogens in the workplace.	4	3	2	1
B. Describe the methods of exposure to bloodborne pathogens in health care workers.	4	3	2	1
C. Identify the risks, risk factors, and prevalence of transmission in health care workers.	4	3	2	1
2. The objectives were relevant to the overall goal of this independent study module.	4	3	2	1
3. The teaching/learning resources were effective for the content.				
4. How much time (in minutes) was required to read this module and take the test?	50	60	70	80

Please print or type: (this information will be used to prepare your certificate of completion for the module).

DEADLINE: DECEMBER 31, 2003. Allow up to 4 weeks for processing.

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