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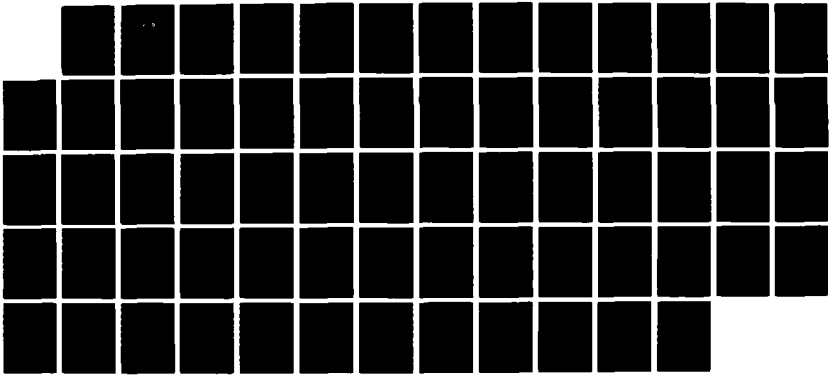

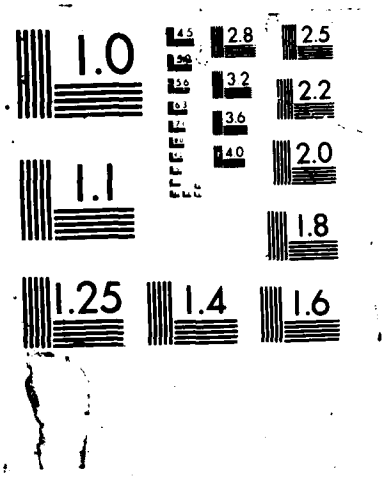
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A STUDY TO DETERMINE THE APPROPRIATENESS OF COMPUTERIZING THE OCCUPATIONAL HEALTH SURVEILLANCE PROGRAM AT FORT DEVENS, MASSACHUSETTS

A Problem Solving Project

Submitted to the Faculty of

Baylor University

In Partial fulfillment of the

Requirements for the Degree

of

Master of Hospital Administration

By

Captain Bonita L. Beattie, AMSC

March 31, 1978

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In 1970 the Occupational Safety and Health Act (OSHA) was enacted. Its purpose was to insure safe and healthful working conditions for every working man and woman in the nation and to preserve our human resources. The Army uses the Occupational Health Surveillance Program to insure compliance with OSHA regulations. This study examines the Occupational Health Surveillance Program at an Army Installation in order to determine the appropriateness of computer application in the monitoring of civilian employee health status. The author examines the present system, determines it to be ineffective and inefficient, and makes recommendations to improve the system.

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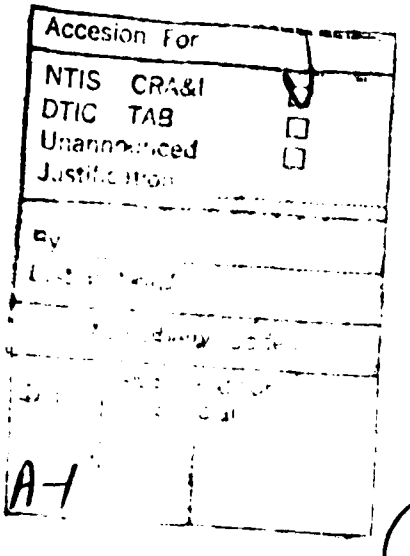

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APPENDICES

I. INTRODUCTION

The enactment of PL 91-596--The Occupational Safety and Health Act (OSHA)--on December 29, 1970 culminated a long, arduous battle for the physical and mental protection of the United States labor force. The initial concerns for the well-being of the American employee and his right to a hazard-free work environment began in the early 1900s, gaining much of its impetus from both muckraking journalism and union activities; the work accident statistics and job-related death tolls gathered by these two groups facilitated a pervasive, humanistic attitude which eventually led to the 1908 enactment of the Workmen's Compensation Statute for federal employees. By 1920, a majority of states had enacted similar laws to shift the economic burden of industrial injuries from employee to employer; yet, such statutes were rarely comprehensive and afforded little employee compensation.[1]

This public, humanistic attitude rapidly dissolved with the decline of muckraking journalism and the onset of the Great Depression, followed soon thereafter by the second World War; thus, for a quarter of a century little organized concern was generated for the safety and welfare of the labor force.

However, the post-World War II era, marked by exploding technological advances, led once again to a concern for the employee's right to a safe, healthful, work environment. Such wide-spread concern added impetus to federally conducted studies of states' programs and achievements in the areas of occupational health surveillance and enforcement; these studies, conducted in the early 1960s, exposed a weak, poorly organized system of state occupational safety and health legislation, deemed inadequate for the American work force.[2]

In reaction to such findings, the Legislative and Executive Branches of the Federal Government fought hard for the enactment of a federal occupational safety and health surveillance bill; yet, corporate strategy and big business lobbyists managed to frustrate such efforts until the late 1960s, at which time Congress finally began extensive hearings into the problem. In 1968, President Johnson joined in overt support of such a federal program when he stated in his Manpower Message to Congress that "it must be our goal to protect every one of America's 75 million workers while they are on the job."[3]

From 1968 until 1970 several Congressional bills were drafted and revised before the present Occupational Safety and Health Act (Williams-Steiger Act) was finally enacted under a Republican Administration. The final bill set as its goal:

> . . . to assure . . . every working man and woman in the nation safe and healthful working conditions and to preserve our human resources . . .[4]

To achieve such a monumental goal, the employer was charged with furnishing both employment and a place of employment free from recognized hazards potentially injurious to the employee.

Although federal agencies (to include the military sectors) were required to comply with OSHA regulations under Title 29 of the Code of Federal Regulations, there were no mechanisms to force the federal sector to participate; as a result, President Ford mandated federal compliance in his Executive Order 11807, issued in September, 1975.[5] Thus, the need for an occupational safety and health program, in compliance with OSHA regulations, has been formally recognized and mandated for the United States Army--to protect the physical and mental well-being of both Department of the Army Civilian (DAC) employees and the active duty sector.

The Army in turn has been exploring the possibilities of setting up such a program to monitor its DAC employees. The United States Army Environmental Hygiene Agency (USAEHA) was charged with the overall responsibility for such a comprehensive program, while the Health and Environment (H&E) Activities of each installation were charged with local responsibility and implementation, under the direct supervision of locally appointed occupational health physicians. Although Department of the Army (DA) guidelines have been developed to, theoretically, ensure an all inclusive program, each H&E Activity has been acting as a semi-autonomous unit, implementing only those occupational health

surveillance programs which it has the time and resources to manage. As a result, the various installations vary widely in the quality, efficiency, and effectiveness of their occupational health programs.

As an example, the Cutler Army Hospital (CAH) H&E Activity at Fort Devens, Massachusetts has been conducting a fledgling Occupational Health Surveillance Program (OHSP), utilizing one part-time technician, and inclusive of less than 25 percent of the civilian workforce; no active duty personnel, however, are monitored in the OHSP. Although potentially hazardous work environments have been generally identified, it has been virtually impossible for this H&E Activity to maintain an up-to-date, effective program due to: (1) a large, mobile, civilian workforce, (2) an undeveloped working relationship between H&E and the Civilian Personnel Office (CPO), (3) limited resources, (4) a lack of understanding by most civilian employees and their local union as to what the program engenders, (5) a voluminous, yet, poor, employee data base from which to extract the required information, and (6) a poorly organized monitoring system. Thus, the Occupational Health Surveillance Program has been deemed ineffective and inefficient, and has been relegated a lower priority by the activity itself; moreover, the program has been judged by the researcher to be no longer in compliance with the full expectations of OSHA; the Department of Labor; the Department of Health, Education, and Welfare; DA; and the USAEHA.

The researcher, therefore, planned to study the present system and the feasibility of computer application to enhance both the effectiveness and efficiency of the CAH OHSP. In addition, the researcher planned to offer guidelines for implementing and managing such a program.

Conditions Which Prompted the Study

The present Occupational Health Surveillance Program at Fort Devens is manually operated on a part-time basis; it is operated with an insufficient data base and, thus, has been estimated to monitor less than 25 percent of the fifteen hundred member civilian workforce. The present system is therefore judged to be ineffective and inefficient; moreover, it is becoming more costly to operate in terms of manhours expended to monitor the present noncomprehensive program.

The aforementioned deficiencies of the OHSP, coupled with a growing public concern for occupational health, and the increasing federal requirements of OSHA led the Chief of the Health and Environment Activity to consider computerization. Thus, the researcher was approached to study the problem and to determine the feasibility of computer application.

Statement of the Problem

To conduct a study of the Occupational Health Surveillance Program at Fort Devens, Massachusetts, in order to determine the appropriateness of computer application in the monitoring of

civilian employee health status.

Research Methodology

The researcher first determined the mandated functions of the OHSP and the local population to which such a program was to be applied in order to estimate the magnitude of the present program noncompliance. An evaluation of computer capabilities was then made, to include a study of those established computer programs or information systems utilizing DAC employee rosters. Through such a study, the researcher determined the feasibility of computer application to enhance future program compliance.

The researcher then studied the on-going industrial hygiene surveillance and noise hazard survey programs conducted on Post; such a study permitted an evaluation of the adequacy, relevance, and utilization of survey information in the development of a more comprehensive, computer-assisted OHSP.

Project Outline

Objectives. -- The intermediate objectives for this study included a determination of:

1. the mandated functions of the OHSP
2. the full capabilities of the IBM 360 computer on Post
3. the content and capabilibities of the five established computer systems utilizing personnel rosters
4. possible cross-reference combinations available in the systems under scrutiny to identify specific activities and

specific employees requiring occupational health surveillance

5. the adequacy and relevance of the industrial hygiene and noise hazard survey program on Post

6. the requirements for medical records management in the OHSP as mandated under the Privacy Act of 1974

Criteria. -- The computerized program would readily identify those civilian employees working in potentially hazardous environments and provide a means of monitoring the health of such employees, thereby ensuring not only a safe, healthful, work environment, but also, an efficient and effective OHSP. Such a program would also provide relevant, useful data that would be simple to retrieve and manage, thus enhancing operator efficiency.

The computerized program would meet these criteria without necessitating prolonged computer time nor requiring a separate, independent program. If these criteria are met, the program derived by the researcher will be deemed acceptable.

Limitations. -- An important limiting factor in this study was the time constraint placed upon the researcher. In order to meet course requirements, the researcher was to submit the completed project by March 31, 1978.

Several other time-related factors also imposed limitations upon this study; in order to computerize any health care program, approval must first be obtained from Health Services Command

(HSC) based upon a written justification and an economic analysis. Moreover, since the IBM 360 at Fort Devens is the property of Forces Command (FORSCOM), all new programs were also subject to FORSCOM approval. The aforementioned time constraint, however, precluded approval by either organization; as a result, the researcher was limited to the development of a program utilizing existing, operational computer programs.

Another limitation was the computer itself; the researcher was wholly dependent upon its capabilities and limitations. Since the IBM 360 was seven years old and a forerunner of the newer, more sophisticated computers, its physical limitations were definite factors to consider. Furthermore, the computer was utilized by numerous organizations on Post and was working near its capacity; thus, the researcher had still another reason to utilize existing programs.

Additionally, the researcher was limited by the resources available to the H&E Activity to staff and operate a more comprehensive OHSP. Although the concept of monitoring a civilian occupational health program has been recognized at Fort Devens since the early 1970s, little emphasis and concommitantly few resources have been applied to the program. For example, the acquisition of an Occupational Health Nurse to oversee the OHSP has been relegated a low priority.

Finally, any program developed by the researcher had to conform to the provisions of the Privacy Act of 1974; specifically, the researcher had to ensure the safeguarding of personal information and the confidentiality of personnel input.

Assumptions. -- Basic assumptions related to this study include:

1. Data processing offered the only practical, efficient means in which to handle the large volume of information necessary to operate a comprehensive OHSP

2. The strong interest and support of this project shown by the H&E staff would continue after the departure of the activity chief in December, 1977

3. An effective, comprehensive OHSP would insure a safe, healthful, working environment by detecting early signs of job-related disease or injury

4. The industrial hygiene and noise hazard surveys would be effective tools in identifying potential areas of industrial safety and health hazards

5. The resources necessary to conduct an extensive OHSP could be made available to H&E -- specifically, paraprofessional support such as radiology, pathology, audiology, optometry, etc.

6. In the preventive capacity envisioned by the researcher, the OHSP would not require substantially increased professional support

7. The H&E Activity, with the acquisition of an

Occupational Health Nurse, would possess the administrative capabilities to conduct an extensive computer-assisted OHSP

8. An Occupational Health Nurse would be acquired in fiscal year 1978 (FY 78)

Literature Review. -- A recent National Occupational Hazards Survey conducted by the National Institute for Occupational Health disclosed that as many as one out of every four working Americans are exposed on a daily basis to hazardous work environments.[6] To lend support to such a finding, another national survey found that over fifteen hundred chemicals produced in the United States are known carcinogens,[7] a hazard not only to the consuming public but also to the producing labor force. Unfortunately, the prognosis is not favorable for an early reversal of this trend toward increasingly hazardous work environments; Ralph Nader summarized the growing problem when he stated:

> . . . As a form of violence, job casualties are statistically at least three times more serious than street crime, . . . with each new discovery or documentation of . . . neglected exposure to gases, chemicals, particulates, radiation, or noise, the epidemic looms larger and more pervasive.[8]

It is therefore imperative that known or suspected safety and health hazards be eliminated or at least controlled, and those employees subjected to such hazards be periodically examined or medically tested in order to detect early signs of job-related disease and injury. Such a program of hazard elimination, and early detection and treatment of exposed

employees not only preserves human resources but also deters costly medical bills, litigation, and employee turnover costs. Thus, such a program may be as economically advantageous to the employer as the employee.

As previously discussed, the H&E Activity on each Army installation is responsible for the development and operation of just such a program to protect DAC employees; also, as previously mentioned, such programs vary greatly in their efficiency and effectiveness. One established program rated quite highly is the computerized Occupational Health Program (OHP) at the White Sands Missile Range (WSMR), New Mexico. This particular program specifies three objectives: (1) to determine if the employee is physically and mentally capable of job performance without undue risk to himself or others, (2) to monitor the effects of the employee's exposure to identified biological, physical, or chemical agents, and (3) to detect early or subclinical effects of accidental exposure to hazardous agents.[9]

The OHP, like most other successful surveillance programs, was based upon a comprehensive hazards identification survey; such an inventory of installation health hazards was not only a logical program core, but also was mandated by both Army regulations and the standards promulgated under OSHA.[10] Once the potential hazards of each work environment were identified, applicable medical tests were chosen to assure the monitoring of each employee's exposure; thus, a list of recommended medical

tests and evaluations was scheduled for each job, based upon the specific work environment. The OHP was assisted greatly in both the identification and surveillance of potential hazards by the USAEHA work in the area of occupational health surveillance. Its Medical Surveillance Guide published in 1975 provided the WSMR H&E Activity with a comprehensive listing, by job title, of all recognized, and potential, health and safety hazards of DAC employees; also provided were appropriate medical tests and the recommended frequency of performance matched to the occupational series code (see appendix B). Thus, the USAEHA guidelines were utilized as the basis of the OHP, but modified somewhat--based upon local occupational hazard surveys and available resources--to meet the specific needs of WSMR.[11]

Such a large volume of information would have been difficult to process manually; therefore, the entire program was computerized utilizing the civilian personnel roster and occupational series codes. In this manner the appropriate tests were matched to each employee by occupational title. A computer print-out is then obtained each month by the WSMR H&E Activity. On the print-out, each employee is identified by name and social security number along with the following encoded information: (1) organization, (2) building location, (3) duty phone number, (4) occupational title, (5) examination or combination of examinations required, and (6) the date of the last examination. Utilizing such information, the H&E Activity is then able to schedule the required health examinations with sufficient notice

to both the employee and his supervisor.

Other occupational health programs, both military and civilian, studied by the researcher were inadequate relative to the WSMR program. Nevertheless, those programs that were comprehensive in scope and computerized realized the same advantages as WSMR, including: (1) increased productivity of the program operating personnel, (2) maximization of existing resources, (3) increased management control, (4) maximized utilization of program feedback, (5) increased employee participation, (6) increased efficiency in monitoring work environments and employees, and (7) increased cost-effectiveness. Thus, a study to determine the feasibility of computerizing the Fort Devens Occupational Health Surveillance Program was deemed appropriate.

Footnotes

[1] Joseph A. Page and Mary-Win O'Brien, Bitter Wages: Ralph Nader's Study Group Report on Disease and Injury on the Job, (New York: Grossman Publishers, 1973), pp. 47-55.

[2] Ibid., pp. 56-65.

[3] Ibid., p. 137.

[4] Occupational Safety and Health Act of 1970, 84 Stat. 1590, Section 2b.

[5] Medical Services: Occupational Health Program, Pamphlet No. 40-2, (Fort Sam Houston, Texas: United States Army Health Services Command, 12 July 1976), p. 1.

[6] ABC, "Good Morning America," 10 October 1977, Dr. John Finklea.

[7] NBC, "Newsbreak," 3 October 1977, Morton Dean.

[8] Page and O'Brien, p. xiii.

[9] Raymond L. Coultrip, "Formation of a Medical Surveillance Program," Health and Environment Information Letter 14 (Fort Sam Houston, Texas: United States Army Health Services Command, 31 May 1977), p. 1.

[10] HSC Pamphlet 40-2, p.1.

[11] Coultrip, pp. 2, 4-5.

II. DISCUSSION

Through a study of the present OHSP the researcher determined that less than 25 percent of the fifteen hundred DACS employed by the Fort Devens CPO were under any form of medical surveillance; in general, the OHSP only responded to specific surveillance requests by employees or supervisors. Moreover, through an informal survey of approximately one hundred DACS (both employees and supervisors), the researcher discovered that few civilians were neither aware of the OHSP, nor the provisions of such a program as recommended by Health Services Command: (1) medical examinations to include preemployment, periodic, fitness for duty, and termination, (2) occupational health counseling, (3) emergency and palliative medical care for job-related incidents, (4) appropriate immunizations, (5) periodic surveillance of at-risk employees, (6) epidemiological investigations of occupational illnesses, (7) hearing conservation and occupational vision programs, (8) surveillance of work environments to identify potential hazards, and (9) monitoring of hazard control measures.[1]

Not surprisingly then, those occupational health records maintained by the H&E Activity merely documented irregular incidents, sporatically recorded, over the individual's span of employment. Furthermore, a large segment of those health records were thought to include employees either terminated or retired; thus, no effective mechanism existed for identifying and retiring such records. Yet, even more importantly, no mechanism existed for initiating health records on new employees. Such organizational difficulties can be easily faulted to the absence of a full-time OHSP director, specifically, an Occupational Health Nurse; thus, the acquisition of such a director is paramount, and will ultimately dictate the success of a computer-assisted OHSP.

In view of the need to reorganize the program under a full-time director, the researcher elected to expand the original project beyond computer application to include a discussion of other essential components of an effective OHSP -- the industrial hygiene and noise hazard surveys, the preemployment and separation medical examinations, and the confidential, effective management of DAC occupational health records. First, however, the researcher will discuss the five identified information systems potentially applicable to a DAC health surveillance program; this discussion will be followed by an evaluation of that system deemed most appropriate for OHSP use.

Available Alternatives

To meet the study criteria as economically as possible, the researcher elected to fully utilize the medical surveillance guidelines developed by the United States Environmental Hygiene Agency; its Medical Surveillance Guide provided a listing of recommended medical tests and frequency of testing matched to the specific occupational series code (see appendix B). Therefore, the researcher attempted to locate an existing computer program which could identify DAC employees by their individual occupational series codes; in this manner, each employee could be subjected to a comprehensive surveillance program tailored to his specific occupation and work environment.

Thus, several computer systems were readily eliminated, reducing the available alternatives to the following five information systems: (1) the By-name Table of Distribution and Allowances (TDA) rosters, (2) the Consolidation of Military Personnel Activities (COMPACT) immunization rosters, (3) the Standard Army Civilian Payroll System (STARCIPS), (4) the Locator Master Tape, and (5) the Standard Civilian Personnel Management Information System (SCIPMIS). The identified information systems incorporated all of the available programs utilizing post-wide personnel rosters; the researcher then carefully studied the elements of each program with Mr. Maki--Chief, Management Information Systems Office (MISO)--and with those managers at the operational level who have been utilizing the individual

information systems.

The first program considered was the By-name TDA rosters, which incorporated both DAC and active duty personnel. These rosters are printed on a quarterly basis providing: (1) employee name, (2) grade level, (3) military occupational specialty (MOS) or occupational series code, (4) employment status, and (5) various authorization codes (see appendix C). Although this program was quite flexible and afforded ten to fifteen spaces for OHSP coding, it was nevertheless rejected. This rejection was based on three inherent application difficulties. The first was the program's exclusion of tenant organizations (see appendix D); such a listing represents a large segment of the civilian workforce. The second application difficulty was the acquisition of FORSCOM approval to code the available free spaces; finally, the time and expense estimated to code each listing could not be economically justified.

The COMPACT immunization roster was next considered. Although this program included tenant organizations, it excluded civilian employees and was therefore rejected.

The STARCIPS, developed by DA but managed by the Pay and Accounting Branch of the Post Finance Division, was also considered, but rejected. The STARCIPS input, exclusive of the active duty personnel, could be retrieved alphabetically or by social security number (in numerical order). However, the program included only the following information: (1) the finance

product number (PCN), (2) employee name, (3) social security number, (4) work center, (5) pay and leave status, (6) pay schedule, (7) grade, (8) hourly rate, and (9) annual salary (see appendix E). This program did not include the job title or occupational series code, nor could such sensitive information as salary level and leave status be deleted from the final print-out for OHSP use; thus, the STARCIPS was rejected.

The fourth consideration was another finance program, the Locater Master Tape. However, such a roster provided only the employee names, social security numbers, and assigned units. Therefore, the use of this tape as the basic program for health surveillance was rejected; nevertheless, it may later be considered for possible cross-reference use to locate mobile employees.

Finally, the SCIPMIS was considered by the researcher; this civilian information system was developed by DA for Army-wide utilization and standardization under the control of local CPOs. The SCIPMIS was introduced to Army installations in mid-1977; however, it was only recently programmed at Fort Devens and, thus, is not yet fully operational nor free of mechanical problems. Yet, such minor difficulties as have arisen are not thought to be of great significance. It is anticipated that such problems could be resolved within a few months through user education and familiarity, and minor system adjustments.[2]

When fully operational the SCIPMIS will provide the most accurate, comprehensive profile of DAC employees among those five systems considered; moreover, it will provide the most flexibility in the retrieval of selected information. In fact, the Fort Devens SCIPMIS may eventually incorporate over eighty-four data elements on each DAC with numerable alternatives for retrieving data, to include the occupational series code. Due to the comprehensive nature of the SCIPMIS, there will, however, be no opportunity for OHSP coding; nevertheless, the available information on each DAC would greatly assist in the overall surveillance of each employee.

In addition to its extensive data bank, the personnel in CPO who are responsible for the creation, maintenance, and utilization of the SCIPMIS data bank have extended assistance and enthusiastic support for a comprehensive, SCIPMIS-assisted OHSP. Since access to this system was restricted by DA and FORSCOM to authorized CPO personnel only, the development of such a working relationship with CPO was essential; thus, the SCIPMIS was selected by the researcher as the only existing information system, readily adaptable, accessible, and applicable to a comprehensive, health surveillance program.

Application of the SCIPMIS

For the researcher's use, selected personnel data could best be retrieved from the SCIPMIS master file through the Personnel Information Retrieval System (PIRS). Eight classes of

reports were available under the PIRS; the researcher elected to utilize the Class 6 report--a free-form, printer listing of selected data elements. In this manner, the researcher could call for all employees on Post within each individual occupational series code. As an example, the employee names of all the DAC food service workers on Post--occupational series code (Occ.) 7408--could be readily retrieved (alphabetically) from the SCIPMIS master file and subjected to the medical surveillance activities prescribed in the Medical Surveillance Guide. Thus, the requested information could be retrieved as follows:

Occ.	NAME
7408	AAAAA
	BBBBB

In order to facilitate the surveillance of the individual employees identified in this manner, the researcher further requested data retrieval by unit identification codes (UIC); thus, all the food service workers could be separated by the individual unit to which they were assigned:

Occ.	UIC	NAME
7408	111	AAAAA
		BBBBB
	222	AAAAA

Additionally, other personal information relative to health surveillance and occupational health records management could be requested through PIRS; the researcher chose to include social security number, sex, date of birth, date assigned to the present duty, handicap code (if applicable), and work schedule. A sample page from the researcher's experimental PIRS request has been included in Appendix F. Also, the researcher chose to request that individual units be printed on separate pages for further ease of employee location; however, the researcher discovered that unit identification was too general for OHSP purposes and, thus, would recommend utilizing the available organization identification codes. Since all of the SCIPMIS codes are standardized, the CPO can supply a table of translations for H&E use. Thus, all food service workers on Post could be readily identified, located, and placed under a comprehensive medical surveillance program as prescribed in the Medical Surveillance Guide.

In this manner, the surveillance of selected employment categories could be achieved on a monthly basis; in other words, selected occupational series codes could be assigned, by month, to undergo the prescribed medical tests or surveillance activities. Thus, each month the Occupational Health Nurse could request the aforementioned information for each assigned occupation; she could then utilize this information to schedule tests, monitor compliance, initiate and follow-up records, and document OSHA compliance. Such an undertaking would require the

development of a long-range schedule of appropriate occupations matched by month to the prescribed surveillance activities; however, those employment categories in recognized hazardous areas, such as pesticide workers, require testing on a more frequent than annual basis, whereas, plumbers may be scheduled triennially. Such considerations are outlined in the Medical Surveillance Guide and must be incorporated into any long-range plan. Moreover, a schedule of occupational series codes must consider the volume of employees within each category and the extent of medical testing prescribed in order to avoid overutilization of CAH facilities in any one month--strength figures for each employment category are available through CPO. Additionally, if the tentative long-range plan was made available to individual DAC supervisors, it would facilitate long-range planning by each organization on Post, to include CAH; such consideration by supervisors should greatly enhance the overall participation and Post support of the more comprehensive OHSP.

Once the long-range plan has been developed, the actual physical application of the SCIPMIS would be relatively simple. The PIRS request form, included in Appendix G, would be completed monthly by the Occupational Health Nurse to request data output on the selected occupations; the request would next be key punched by the CAH key punch operator. The cards would then be submitted to Mrs. Woodcome, Chief of the Technical Services Branch, CPO. The H&E PIRS request would finally be submitted to MISO with the semi-weekly CPO requests; once the PIRS action is

completed and the print-out returned to CPO, it would be forwarded to the Occupational Health Nurse with the appropriate Privacy Act cover statement (see appendix H). The above process has been outlined in the form of a flow chart in Appendix I; although it appears cumbersome, by regulation PIRS requests must be submitted through CPO. In actuality, dependent upon when the initial request is submitted, the resultant print-out can usually be received by H&E within two working days.

Not only is the application of the SCIPMIS relatively simple to administer, but it is also relatively economical to operate; the actual training of the Occupational Health Nurse to utilize the PIRS request form could be accomplished in less than one hour. Following such training, the actual completion of the form should average less than ten minutes, whereas, the key punch operator's time on a monthly basis is estimated at thirty minutes or less. CPO personnel time is negligible as is the actual computer time. Thus, the economic costs and personnel time involved would be far less than presently expended with a greater return on the investment; moreover, utilization of the SCIPMIS by organizations other than CPO may help to justify DA expense in developing this comprehensive information system.

Therefore, in the researcher's opinion, the SCIPMIS may be utilized to enhance the overall management and operational efficiency of the Fort Devens OHSP; however, to further increase the effectiveness of the program and the appropriateness of the

actual medical surveillance testing, local industrial hygiene and noise hazard surveys must be conducted and incorporated into the overall OHSP.

Industrial Hygiene and Noise Hazard Surveys

The two most basic tools in any effective OHSP are the industrial hygiene and the noise hazard surveys. These surveys are conducted in the actual work environments to identify: (1) hazardous or potentially hazardous work areas and equipment, (2) ineffective hazard control measures, (3) unsafe work habits, and (4) employee exposure to chemical or physical agents. Such survey findings are then utilized to develop individual medical surveillance programs for the exposed employees; in this manner, at-risk employees can be subjected to specific testing appropriate for the identified exposure.

Although the Medical Surveillance Guide provides OHSP medical surveillance activities tailored to the occupational series codes, such recommended activities are based on general employment requirements; yet, within each identified occupation, there are numerable variations in the job requirements and potential hazards encountered by the employee. Such variations, special circumstances, and multiple exposures can only be identified by local surveys. Thus, the local validation and modification of USAEHA guidelines are essential; moreover, such a process is mandated by OSHA and Health Services Command.[3]

At Fort Devens, the Environmental Science Officer (ESO) assigned to the H&E Activity is charged with conducting the industrial hygiene surveys while the CAH audiologist is responsible for noise hazard surveys. The noise hazard surveys have been well documented and represent a comprehensive, on-going program of hearing conservation established in 1975. However, the industrial hygiene survey program has been sporatically conducted and documented in the past; such a deficiency is expected to be remedied by late Spring, 1978 under the direction of a newly assigned ESO.

The identification of an industrial hygiene hazard is only the first step in the survey program; the second step requires the engineering of control measures to eliminate or reduce the identified hazard. Employees must then be educated to observe such safety or control measures; finally, employees exposed to such hazardous environments must be medically monitored. Such a survey process is time-consuming due to the following surveyor requirements: (1) familiarity with the work processes of each occupation, (2) an indepth inventory of all physical and chemical agents encountered, (3) a review of specific job activities, and (4) a study of present hazard control measures. A copy of the industrial hygiene surveillance form utilized in this survey process has been included in Appendix J. Although such a process is time consuming, the alternative of not surveying can be costly to the Federal Government, as the responsible employer, and to the employee in terms of job-related injury or disease.

Even though the audiologist often conducts noise hazard surveys in conjunction with the industrial hygiene surveys, he also conducts a hearing conservation program independent of the H&E Activity. DACs employed in areas identified as noise hazardous are subjected to annual audiometric testing and hearing conservation education. The audiologist schedules such annual examinations by unit or organization rather than specific occupation; thus, the PIRS request, designed for OHSP use, would not assist the audiologist in this surveillance program. However, the flexibility of the SCIPMIS would permit a separate PIRS request, listing employees by unit or organization rather than occupational series code; in addition, social security number, sex, date of birth, date entered on present duty, handicap code, and work schedule could also be requested. It is thus envisioned that the audiologist would submit a long-range plan to the Occupational Health Nurse who would then submit a monthly audiology request along with the OHSP PIRS request.

In this manner, it would not be necessary for the audiologist to validate or modify the specific USAEHA guidelines; however, it is imperative that the ESO modify these guidelines at the termination of his survey process. Such modification would ensure a more appropriate OHSP, reflective of local conditions and circumstances; periodic updating and re-surveying of work environments would also be necessary to maintain the effectiveness of the modified guidelines. This process is especially important at Fort Devens where frequent location

changes are scheduled to consolidate activities and reduce energy consumption.

In conjunction with the local surveys, a DAC educational program must be developed to inform employees and supervisors of identified hazards and safety measures designed to preclude injury or disease. Such an educational process should be based upon the recognition that the problem of controlling industrial hazards cannot be accomplished by preventive engineering alone--hazards can only be controlled in the occupational environment by a combination of good engineering, safe operating practices, and employee cooperation.[4] Moreover, the informed employees can often participate in the surveys where hazardous exposure is irregular or infrequent; through education, they may also be capable of anticipating or circumventing hazards.[5] Thus, the education of employees and their supervisors can easily enhance the effectiveness of the surveys, and concommitantly, the OHSP itself.

Finally, both the OHSP and the local hazard survey program are necessarily predicated on one basic assumption--that the employee's health status is good.[6] In other words, the surveillance of the employee's occupational health status may be worthless if the employee is hired or terminated with unrecognized health impairments; one effective manner of precluding this problem is to adopt the preemployment and separation examination as integral parts of the OHSP.

Preemployment and Separation Examinations

An Occupational Health Surveillance Program cannot achieve its objectives without documented baselines of employee health status prior to employment. The present OHSP incorporates pre-employment testing on food service workers only; in most other hire actions the H&E Activity is not routinely notified. Such a deficiency may be faulted to its poor working relationship with CPO.

Not only should the preemployment examination be utilized to establish baselines of health status, but also to determine the initial, physical capability of the job applicant to perform the job for which he is being considered. During this examination a careful history of past illnesses and occupations should be carefully evaluated and recorded, since a prospective employee may be predisposed to ailments based entirely on previous exposures or illnesses.[7] In fact, it is speculated that no prospective employee is without some physical defect; if the physical requirements of the job were considered in relation to the employee's limitations, the frequency of job-related accidents could be reduced, the probability of job-related illnesses may decline, and the overall productivity of the employee could be increased.[8]

Thus, each employer has not only an obligation, but also a financial incentive to see that he avoids employing persons who are physically or mentally unsuited for the job considered.

However, such a screening process must be objective and substantiated; therefore, the careful use of the United States Civil Service Commission Certificate of Medical Examination (SF 78-110) should be fully utilized to evaluate the prospective employee in relation to the job requirements (see appendix K). Those prospective employees with medical disabilities thought to adversely affect job performance should be referred to their own civilian practitioners for resolution; thus, the employee could still be considered for a particular job contingent upon problem correction. Medical findings not thought to impact upon the job should be documented, but, shared only with the prospective employee. Such preemployment examinations should be routinely performed for those employment categories recognized as hazardous, or potentially hazardous, and for those jobs with particular physical requirements; thus, it would not be necessary to subject every prospective employee to extensive examination. In other words, the preemployment examination program should be tailored to the specific occupational series code.

The separation health examination, however, is just as important as that for preemployment; such an examination should be routinely administered to employees who have been exposed, or are suspected of exposure, to any occupational health or noise hazard. It is the employer's legal and moral responsibility to ascertain the employee's health status prior to separation;[10] in this manner, the employee's health status can be compared and well documented to his baseline, preemployment status. Such

documentation will serve to protect employees with serious job-related health impairments; moreover, it will protect the Federal Government from unfounded liability suits litigated years after employment termination. Unfortuately, such separation examinations are rarely conducted in the present OHSP, again perhaps faulted to the H&E's poor working relationship with CPO.

Thus, in the researcher's opinion, an important adjunct to the planned computer-assisted OHSP is the preemployment and separation health examination program. However, such a program will necessitiate coordination and cooperation with CPO since all civilian hire actions and separations are handled by this organization.

A final facet of the planned OHSP is the documentation and security of the derived medical information; such information, revealed during the preemployment examination, medical surveillance testing, and separation examination is of a confidential nature and requires appropriate security.

Occupational Health Records Management and Confidentiality

The secure and confidential management of DAC employee occupational health records is an important aspect of the computer-assisted OHSP. The record itself should span the length of employment; to this end, a record should be initiated with the preemployment examination, updated periodically under the medical surveillance program, documented in episodes of job-related

injury or illness, and finally, terminated with the separation health examination.

Such recorded information may be of a very sensitive nature and must be respected as such; moreover, the information is subject to the provisions of the Privacy Act of 1974--just as any medical encounter. Thus, records management in regard to confidentiality is no different in the occupational health setting than in a hospital or physician office setting. Therefore, if the practitioner violates the privacy rights of the employee, he may be personally liable for damages.[11] In this unique employment setting, the Federal Government may also be held liable; therefore, the occupational health records must be secured with access limited to the practitioner and the Occupational Health Nurse.

The aforementioned rights and responsibilities, however, are somewhat altered when the encounter is solely for the purpose of ascertaining employability, as in the preemployment examination. It is generally agreed that implied consent to disclose employability to the employer is acknowledged by the prospective employee's willingness to undergo such an examination.[12] Thus, if the prospective employee is thought unemployable for a particular job, the employer (in this case, CPO) has a right to be notified, but, full disclosure of findings is prohibited and should be restricted to minimum details.[13] If the employee is deemed employable, yet medical disabilities or

impairments are noted, it is the responsibility of the practitioner to fully inform the employee and to advise him to seek appropriate medical care; such findings must be documented in the health record but cannot be shared with CPO unless waivered by the employee.

In all other encounters the findings must remain confidential. The only exception to this dictum would be when the findings pose a threat to other employees; if the employee in question is diagnosed as contagious or otherwise dangerous to others, or if the suspected cause poses a danger to others, the practitioner has a duty to inform the employer and other employees.[14] Additionally, any findings suspect of the work environment should also be promptly reported to the ESO for further study.

It is the researcher's opinion that the management of the DAC health records should solely be the responsibility of the Occupational Health Nurse at the Health and Environment Activity where the records are maintained, thereby limiting access and enhancing local control over the records. The Occupational Health Nurse should also be responsible for coordinating and overseeing the documentation of medical information and ancillary medical service reports in the health records; moreover, the nurse should be responsible for insuring that remedial action is taken if adverse medical findings are procured. Such remedial action should include but not be limited to the following: (1)

prompt notification of the appointed occupational health physician, (2) assurance of medical follow-up for the employee, (3) assurance of employee notification and education by the responsible physician, (4) if appropriate, assurance of employee, supervisor, and ESO notification by the physician, and (5) prompt, accurate record documentation.

Thus, it must be recognized that timely and accurate documentation of medical surveillance activities in confidentially-managed occupational health records is imperative for an effective, comprehensive, and legally responsible OHSP.

Footnotes

[1] HSC Operating Program--Health and Environment Guidelines for Implementation of a Health and Environment Program for MEDCEN/MEDDAC, HSC Regulation 11-4 (Fort Sam Houston, Texas: Health Services Command, 17 July 1975), p. 6.

[2] Discussion with Richard Maki, Management Information Systems Office, Fort Devens, Massachusetts, 16 January 1978.

[3] HSC Pamphlet 40-2, p. 1.

[4] G. W. Daubenspeck, Occupational Health Hazards, (Hicksville, New York: Exposition Press, 1974), p. 15.

Don D. Irish, "The Significance of the Occupational Environment as a Part of the Total Ecological System," The Industrial Environment-- It's Evaluation and Control, (Washington, DC: U.S. Government Printing Office, 1973), p. 8.

[5] Jack E. Peterson, "Principles for Controlling the Occupational Environment," The Industrial Environment--It's Evaluation and Control, (Washington, DC: U.S. Government Printing Office, 1973), p. 515.

[6]Bertram D. Dinman, "Principles and Use of Standards of Quality for the Work Environment," The Industrial Environment--It's Evaluation and Control, (Washington, DC: U.S. Government Printing Office, 1973), p. 76.

[7]U.S. Department of Health, Education, and Welfare, Occupational Diseases: A Guide to Their Recognition, (Washington, DC: U.S. Governmental Printing Office, 1973), p. 2.

[8]Jon L. Konzen, "Design and Operation of an Occupational Health Program," The Industrial Environment--It's Evaluation and Control, (Washington, DC: U.S. Government Printing Office, 1973), p. 694.

[9]Edwin J. Morgan, "Medical Surveillance," National Safety News, December 1971, p. 94.

[10]Bertram D. Dinman, "Medical Aspects of the Occupational Environment," The Industrial Environment--It's Evaluation and Control, (Washington, DC: U.S. Government Printing Office, 1973), p. 203.

[11]George J. Annas, "Legal Aspects of Medical Confidentiality in the Occupational Setting," Journal of Occupational Medicine, August 1976, pp. 538, 540.

Frances H. Miller, "The Rights of the Employee as Patient," Occupational Health Nursing, December 1977, p. 11.

[12]Miller, p. 12.

[13]Annas, p. 538.

[14]Ibid., p. 540.

III. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The application of the SCIPMIS to the Fort Devens Occupational Health Surveillance Program has been deemed appropriate by the researcher; such an application would not only enhance the general management and efficiency of the OHSP but would also maximize the utilization of existing resources. Furthermore, such computer utilization would reduce the present administrative costs associated with operating the OHSP while substantially increasing the productivity of the OHSP director and the ESO.

Moreover, the resultant more efficient and effective OHSP would increase Post compliance with OSHA regulations and surveillance requirements; thus, in the long run, it would also reduce Federal Government liability in alleged employment induced disability or illness litigations. Such enhanced program efficiency and associated economic savings are important, tangible advantages of computer application.

Nevertheless, the less tangible advantages are just as important and readily achievable, to include: (1) increased DAC employee morale and well-being, (2) enhanced working relationships between the H&E Activity and CPO, (3) increased job satisfaction of those H&E personnel supervising the OHSP, (4) increased general employee and supervisor awareness of occupational hazards and safety measures, and (5) increased employee (and supervisor) understanding and compliance with prescribed safety measures.

Finally, such an improved OHSP should facilitate future compliance with the ever-increasing state and federal requirements for safe, healthful employment and working environments.

Recommendations

A long-range plan to implement a comprehensive, computer-assisted Occupational Health Surveillance Program will be necessary to insure the effectiveness and efficiency of the overall program. Thus, the following sequential recommendations are submitted by the researcher:

1. To secure approval on the hire action of an experienced Occupational Health Nurse

2. To determine those resources budgeted for a comprehensive OHSP

3. To develop a working relationship with CPO through

personal contact and educational assistance

4. To continue the industrial hygiene and noise hazard surveys for appropriate work environments on Post; to coordinate the surveys and findings with the Post Safety Officer

5. To insure employee education and participation in the surveys to facilitate the development of safe work practices

6. To recommend control or elimination methods to cope with hazards identified in the surveys

7. To insure supervisor and employee education in the utilization of hazard control measures and the purpose of the OHSP

8. To modify the Medical Surveillance Guide to reflect local conditions identified in local surveys

9. To develop a long-range forecast of the health surveillance program by assigning specific occupations to each month of the year(s)

10. To determine the overall workload generated by such a plan, and to determine its impact upon CAH resources; then to modify the long-range plan as necessary

11. To circulate the final long-range plan among the supervisors of involved DACs and appropriate CAH activity supervisors

12. To conduct a training program for appropriate H&E and audiology personnel on computer applications, PIRS requests, records management, and the provisions of the Privacy Act of 1974

13. To conduct a trial, PIRS-assisted program as outlined

by the researcher with one previously noted exception: substitute organizational identification code for unit identification code

Through implementation of the above recommendations, the computer-assisted, comprehensive OHSP can be effectively initiated with the least disruption of work environments and CAH resources. Periodic industrial hygiene and noise hazard surveys should then compliment the OHSP with appropriate program modifications.

Following the implementation of the computer-assisted OHSP, it will be most important to evaluate its comprehensive coverage and cost-effectiveness; such an evaluation must include the effect of the generated workload on CAH, the overall employee participation, and the total cost involved. The reseacher would judge the OHSP to be successful if at least 95 percent of the DAC employees on Post--subjected to any recognized or potential occupational hazard--would then be under active surveillance and if CAH was then able to provide medical support without adversely affecting its overall mission.

Finally, the ultimate success or failure of the OHSP will be dependent upon the establishment of close, professional, working relationships with the higher commands on Post, CPO, management on all levels, union officials, and employees. Such an endeavor will require both the high visibility and access of the ESO and the Occupational Health Nurse, and the prompt, professional response to assistance or informational requests.

APPENDIX A

Definitions of Terms Appearing in this Paper

Information System--A collection of people, procedures, and equipment designed, built, operated, and maintained to collect, record, process, store, retrieve, and display information.

Occupational Health Surveillance--The monitoring of employee health status to determine the physical and mental effects of job-related health or safety hazards; the objectives of such a monitoring system are the early detection or prevention of irrepairable physical or mental injury.

Occupational Series Code--A numerical code assigned to each identified civilian occupation employed by the Department of Army; such a code equates to the active duty Military Occupational Specialty (MOS).

APPENDIX B

Extraction from the Medical Surveillance Guide

Pay Schedule	Occupational Code	Title	Determining Factor	Examination	Frequency
WG	3720	Brazer and Solderer	UV, IR, IV Radiation	Vision Screening	Annual
			Metal and Flux Fumes (Including Cadmium)	Chest X-ray	Annual
				Pulmonary Functions	Annual
				Urinalysis	Annual
			Lead (painted surfaces)	Urinary Lead	Annual
WG	3725	Battery Repairer	Acid & Acid Mists	Skin Exam	Annual
				Vision Screening	Annual
				Dental Exam	Triennial
			Lead	Urinary Lead	Annual
WG	3802	Drop Hammer Operator	Noise	Audiogram	Annual
WG	3806	Sheet Metal Mechanic	Noise	Audiogram	Annual
			Welding: UV, IR, IV Radiation	Vision Screening	Annual
			Metal and Flux Fumes	Pulmonary Functions	Annual
				Chest X-ray	Biennial
				Urinalysis	Annual
			Lead (painted surfaces)	Urinary Lead	Annual
WG	4006	Grinder (Optical Elements)	Silica	Pulmonary Functions	Biennial, Annual if exposure exceeds limits
				Chest X-ray	
				TB Testing	
			Lens Coatings		
WG	4102	Painter	Organic Solvents	SGOT, SGPT, ALK. PO_4, CBC	Annual
			Lead	Urinary Lead	Annual
			Isocyanates (Urethanes)	Pulmonary Functions	Annual
				Total Eosinophil Count	Annual
				Interim Medical History	Annual
WG	4104	Sign Painter	Organic Solvents	SGOT, SGPT, ALK. PO_4, CBC	Annual
			Lead	Urinary Lead	Annual
			Isocyanates	Pulmonary Functions	Annual
				Total Eosinophil Count	Annual
				Interim Medical History	Annual
WG	4204	Pipefitter	Heat	Routine	Age Related
			Noise	Audiogram	Annual
			Asbestos	Routine	Biennial, Annual if exposure exceeds limits
				Chest X-ray	
				Pulmonary Functions	
			Lead	Urinary Lead	Annual
			Raw Sewage	Polio Immunization	Basic Series
				Typhoid Immunization	Basic Series then Triennial Reimmunization
WG	4206	Plumber	Lead	Urinary Lead	Annual
			Raw Sewage	Polio Immunization	Basic Series
				Typhoid Immunization	Basic Series then Triennial Reimmunization

APPENDIX C

Extraction from the By-Name TDA Roster

INPUT ANALYSIS REPORT TDA-TYPE B
PART I INPUT TRANSACTION AND ERROR LISTING
USA MEDDAC FORT DEVENS

PROPOSED
TDA W5W2JJAA
CCNUM W59999

SECTION II PERSONNEL ALLOWANCE

PARA	LINE	DESCRIPTION	GR	MOS	ASI/LIC	BR	ID	AMS	PARENT UNIT LINE REQ	PARENT UNIT TOTAL AUTH	PARENT UNIT NET CHANGE REQ	PARENT UNIT NET CHANGE AUTH	RMKS	ACTION PP	ACTION CA	ACTION COE
015A	02A	JACOBSEN LUCIA	03	00699		GS	C	X	0	0				P		
		AMSC FIELD INVALID														
		*** ABOVE LINE NOT ADDED ***														
015A	03	FOOD SVC WORKER FN	03	07408		WS	C	84771116100	1	1						
015A	03A	WELTON DOROTHY	03	07408		WG	C	X	0	0				P		
		AMSC FIELD INVALID														
		*** ABOVE LINE NOT ADDED ***														
		PARAGRAPH TOTALS							4	3						
015B	00	PROD & SVC BRANCH														
015B	01	HOSP FOOD SVC STWD	E6	94F30		NC	I	P.771116100	1	1						
015B	01A	GREER GRADY	E6	94F30		NC	I	X	0	0				P		
		AMSC FIELD INVALID														
		*** ABOVE LINE NOT ADDED ***														
015B	02	HOSP FOOD SVC 1ST CK	E5	94F20			I	84771116100	1	1						
015B	02A	TORRES N	E5	94F20			I	X	0	0				P		
		AMSC FIELD INVALID														
		*** ABOVE LINE NOT ADDED ***														
015B	03	HOSP FOOD SVC COOK	E3	94F10			I	84771116100	1	1						
015B	03A	HIGGS D	E4	94F10			I	X	0	0				P		
		AMSC FIELD INVALID														
		*** ABOVE LINE NOT ADDED ***														

APPENDIX D

Tenant Organizations

187th Infantry Brigade
902d Military Intelligence
AMEDD Procurement Office
Army Region Readiness Group I
Criminal Investigative Command
Cutler Army Hospital
Defense Property Disposal Office
Defense Investigative Service
New England Area Exchange
Troop Support Agency
U.S. Army Communications Command Detachment
U.S. Army Intelligence School
U.S. Army Special Security Group

APPENDIX E

Extraction from the STARCIPS

	SOC SEC ACCT NR	EMPLOYEE NAME	WORK CENTER	PAY/LV STATUS	PAY SCHEDULE	GRADE	HOURLY RATE	ANNUAL SALARY
05	026-24-9156	WRIGHT THERESA J	00A02	1	10	04/02	4.13	$8,593
05	029-40-9395	WURZEL EDITH A	00A04	1	10	07/01	5.54	$11,523
03	092-38-9596	WYFFELS DAVID F	U7N45	1	50	08/05	7.00	$000
04	075-24-5260	WYNNE NEAL K	FON01	9	50	09/05	.00	$000
01	550-05-5311	WYSE MARCUS L	S7A27	1	10	07/06	6.46	$13,443
03	105-28-6622	YACUBIC ROBERT F	U7A09	1	10	06/02	5.15	$10,716
05	118-09-0748	YAGER HELEN A	07A08	1	10	04/10	5.20	$10,809
05	019-20-7760	YAGER LAURA M	00A02	1	10	04/09	4.93	$10,255
01	1?2-18-4073	YEVINS MARY	S7A03	1	10	09/05	7.68	$15,977
07	315-46-2558	YOCUM WILLIAM C	X0A01	9	10	05/04	.00	$000
02	031-20-9134	YONGE WILLIAM A JR	FON01	1	50	10/11	7.83	$000
05	027-44-1435	YOUNG DEBORAH A	00A02	1	10	03/01	3.56	$7,408
07	012-44-3274	YOUNG DEBRA S	P0101	1	10	03/01	3.56	$7,408
04	0?0-74-2240	YOUNG JAMES C	FON01	1	50	10/04	7.15	$000
05	024-44-5256	YOUNG JASMINE R	00A02	1	10	04/01	4.00	$8,316
04	025-14-9813	YOUNG JOHN	F7A01	1	10	09/03	7.23	$15,037
05	543-52-6430	YOUNG JUNE C	01A02	1	10	05/03	4.77	$9,923
01	552-36-2773	YOUNG WILLIAM L	S7N38	1	50	09/05	6.27	$000
07	445-40-2374	YOUNGBLOOD HARRY R	P0101	1	10	09/02	7.00	$14,567
02	033-10-3302	ZABIEREK EMIL	FON01	1	50	09/05	7.17	$000
02	010-14-5804	ZADROGA STANLEY	FON01	1	50	05/05	6.19	$000
06	034-32-1543	ZACHAI FRED P	T1?06	1	10	06/04	5.48	$11,408
04	033-22-4274	ZAHER MEDERICK	FON01	1	50	12/05	7.94	$000

APPENDIX F

Extraction from the SCIPMIS Programmed for Occupational Health Surveillance

INFORMATION RETRIEVAL REPORT REQUEST NO. 001 DATE 03/08/78

OCC.	UIC	NAME	SSN	SEX	D-BIRTH	D-DTY	HC	WS
07408	HSW2JJAA	WHEELER, CECILE M.	034035827	F	1c0927	6609	04	1
07408	HSW2JJAA	LINK, PAUL A	049340295	M	461113	0000	04	1
07408	HSW2JJAA	CROCKETT, DINA M.	144283276	F	230206	7007	04	1
07408	HSW2JJAA	WILLIAMS, SALLY A	255869367	F	530310	0000	04	1
07408	HSW2JJAA	MCMILLER, WILLIE NMN	433580710	M	190909	7106	04	1
07408	HSW2JJAA	HOOK, PAUL F	500077300	M	130211	0000	04	1
07408	HSW2JJAA	HEBERT, ANNA M.	030244797	F	320921	7211	04	1
07408	HSW2JJAA	LAPHAM, ROGER E.	024166355	M	210901	6210	04	1
07408	HSW2JJAA	CARBO, VINCESA V.	018127069	F	220916	6607	24	1
07408	HSW2JJAA	WELTON, DOROTHY G.	018034714	F	150512	5009	04	1
07408	HSW2JJAA	SHANNON, HAROLD F	016244256	M	310213	0000	04	1
07408	HSW2JJAA	KASPER, STANLEY F	019124741	M	170506	5807	04	1
07408	HSW2JJAA	GKOLIAS, JOHN M.	018202879	M	280830	7002	04	1
07408	HSW2JJAA	FERNETTE, PAUL E.	010307261	M	390210	7702	04	1

APPENDIX G

PIRS Request Form

PIRS REQUEST - LOGIC - SORT

PIRS REQUEST

D/C	RE-QUEST NO	TRAILER NO	OUTPUT CLASS	BLANK	DATA PRINT FIELDS (DEINS-SPACING-FIXED CHARACTERS)													
					FIELD 1	FIELD 2	FIELD 3	FIELD 4	FIELD 5	FIELD 6	FIELD 7	FIELD 8	FIELD 9	FIELD 10	FIELD 11	FIELD 12	FIELD 13	FIELD 14
N 9 1		1																
N 9 1		2																
N 9 1		3																
N 9 1		4																

PIRS LOGIC

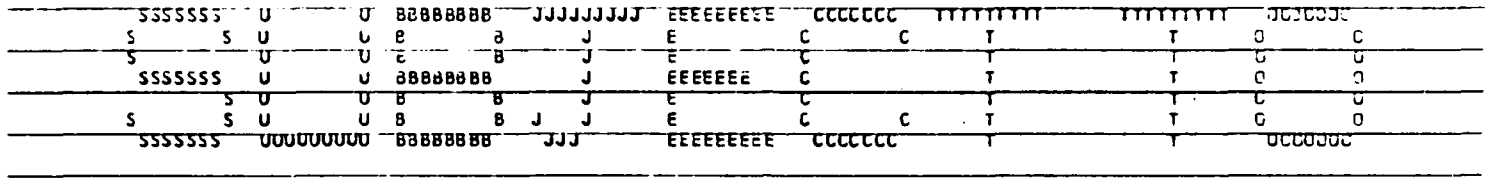
D/C	RE-QUEST NO	TRAILER NO	BLANK	LOGIC FIELDS								BLANK
				LOGIC	DEIN	OPER	COMPARISON CHARACTERS	LOGIC	DEIN	OPER	COMPARISON CHARACTERS	
N 9 2		1		A N D								
N 9 2		2										
N 9 2		3										
N 9 2		4										
N 9 2		5										
N 9 2		6										
N 9 2		7										
N 9 2		8										
N 9 2		9										

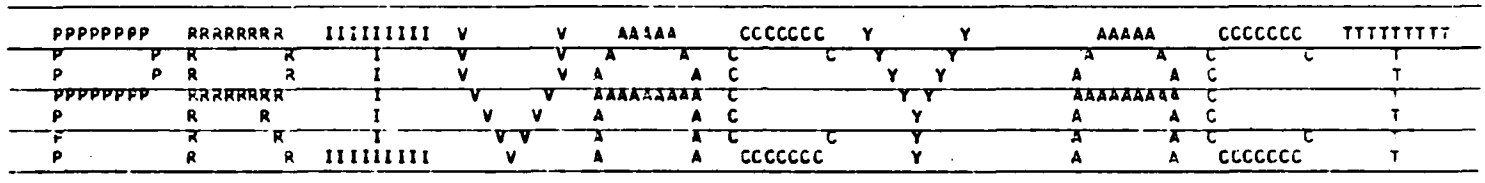
PIRS SORT

D/C	RE-QUEST NO	BLANK	SORT FIELDS (DEINS-DESCENDING SEQUENCE-PAGE BREAKS-TOTALS-COMBINATION TOTALS & PAGE BREAKS)													
			FIELD 1	FIELD 2	FIELD 3	FIELD 4	FIELD 5	FIELD 6	FIELD 7	FIELD 8	FIELD 9	FIELD 10	FIELD 11	FIELD 12	FIELD 13	FIELD 14
N 9 3																

APPENDIX H

Privacy Act Cover Statement



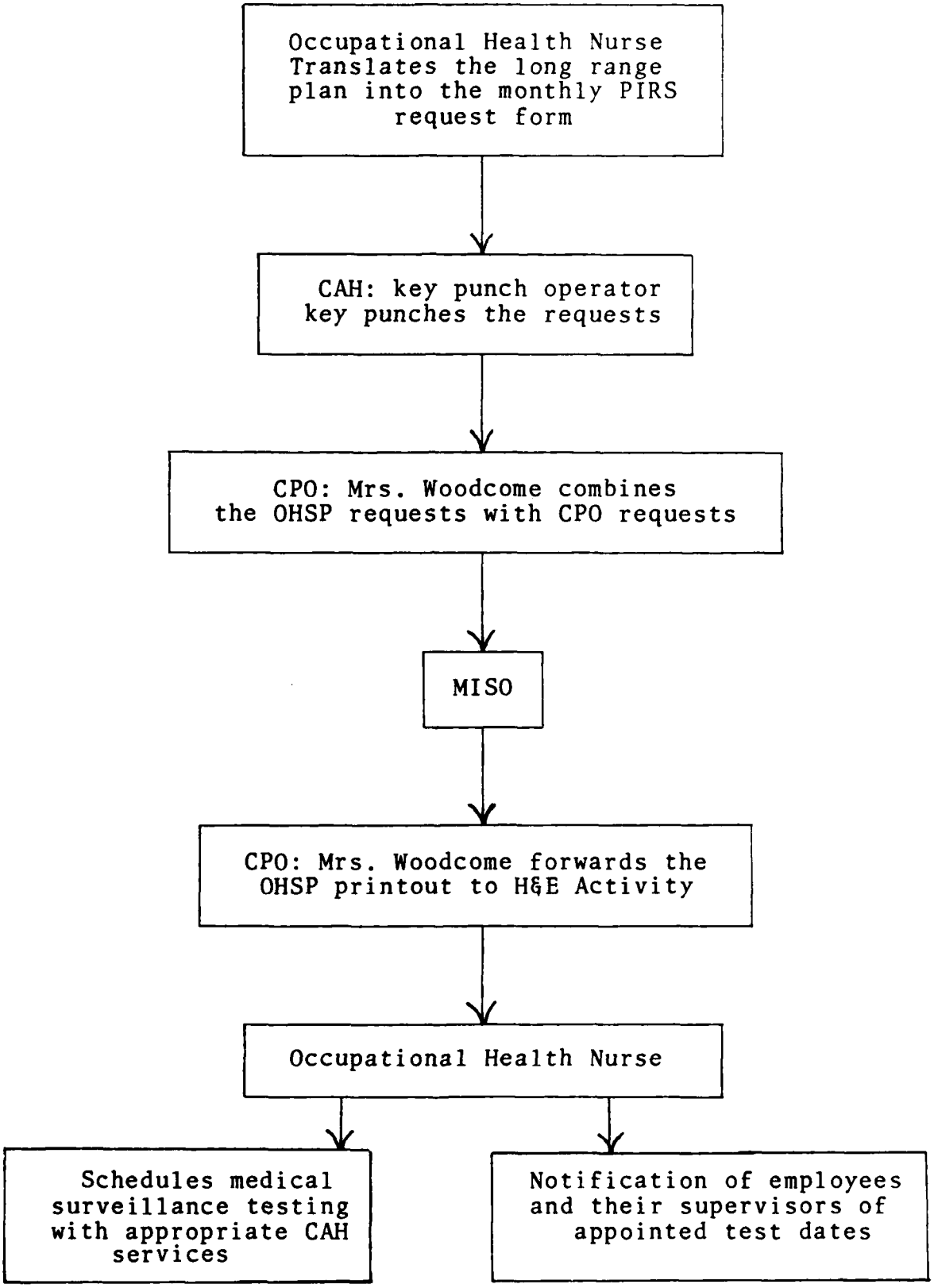


THIS LISTING CONTAINS PERSONAL INFORMATION PROTECTED BY THE PRIVACY ACT (5 USC 552A).

SAFEGUARD IAW PARA 5-13, AR 340-21 (TO BE PROTECTED IN THE SAME MANNER AS FOR OFFICIAL USE ONLY).

APPENDIX I

Flow Chart Displaying the Submission and Completion of the PIRS Request


Occupational Health Nurse Translates the long range plan into the monthly PIRS request form
CAH: key punch operator key punches the requests
CPO: Mrs. Woodcome combines the OHSP requests with CPO requests
MISO
CPO: Mrs. Woodcome forwards the OHSP printout to H&E Activity
Occupational Health Nurse
Schedules medical surveillance testing with appropriate CAH services
Notification of employees and their supervisors of appointed test dates

INDUSTRIAL HYGIENE SURVEILLANCE

SURVEYOR'S NAME: _____ DATE: _____

I. LOCATION: (Bldg No., Directorate, Unit, Bay, Room, Etc.)

_____

II. OPERATION:(Type of Process, Room Size, Isolated or Not, Etc.)

_____

III. EXPOSURE:

a. Chemical Agents: (Amount, Concentration, FSN, Tradename, Etc.)

b. Physical Agents: (U-V Light, Infrared, Intense Visible Light, Noise, Microwave, Ionizing Radiation, Vibration, Etc.)

	Present		Posted			
Noise:	Yes	No	Yes	No	Measured: _____	dBA
Eye Hazard:	Yes	No	Yes	No		
Lighting:	Adequate		Not Adequate		Measured: _____	fc

c. Personnel: (No. exposed; No. hours/day; Employees' Names ? Job

APPENDIX K

Civil Service Certificate of Medical Examination

Health Services Command. Health and Environment Guidelines for Implementation of a Health and Environment Program for MEDCEN/MEDDAC. HSC Regulation 11-4. Health Services Command, 17 July 1975/C, 30 June 1976.

Health Services Command. Medical Services: Occupational Health Program. Pamphlet No. 40-2, United States Army Health Services Command, 12 July 1976.

U.S. Department of Health, Education, and Welfare. Occupational Diseases: A Guide to Their Recognition. Washington, DC: U.S. Governmental Printing Office, 1973.

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Annas, George J. "Legal Aspects of Medical Confidentiality in the Occupational Setting." Journal of Occupational Medicine (August 1976): 537-540.

Miller, Frances H. "The Rights of the Employee as Patient." Occupational Health Nursing (December 1977): 11-13.

Morgan, Edwin J. "Medical Surveillance." National Safety News (December 1971): 94-99.

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