

FINAL PERFORMANCE REPORT

**University of Hawaii at Manoa
School of Public Health
Honolulu, Hawaii 96822**

Project Title: Occupational Health Training

Total Project Period: July 1, 1997 - June 30, 2000

Program Director: Premlata Menon, Ph.D.

NIOSH Grant Number: T01/CCT910436-05

August 14, 2000

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Abstract

Award of the NIOSH renewal and continuation training grants for the period of this report (07/01/97 - 06/30/00) permitted the University of Hawaii School of Public Health to maintain an uninterrupted program emphasis in Occupational Health. Within the framework of a broadly based curriculum in public health, the program offered 11 occupational safety and health related courses. During the current reporting period, 126 students enrolled in the Occupational Health courses. Some 25 graduates of the School of Public Health during this time were considered to have had an emphasis in occupational health. Program faculty made 11 public presentations on occupational safety and health topics reaching more than 600 individuals in the community.

Description of Training Program.

1. Background.

1.1. Purpose & Program Characteristics.

The purpose of the program is to train occupational health professionals at the Master's degree level. The program focuses on manpower and training needs for the State of Hawaii and the mainland U.S. The program also serves the broader Asia-Pacific region, including the U.S.-Associated Pacific Jurisdictions. The program has achieved much of its success because of a NIOSH-supported occupational health training grant which has been in place for nearly 20 years.

The Environmental and Occupational Health Program is located in the Department of Public Health Sciences, School of Public Health. The program requires 30-36 semester hours of classroom work and either a field practicum (for the MPH degree) or a research thesis (for the MS degree). The current training is centered on industrial hygiene, but also supports interests in occupational medicine, nursing, and safety. By virtue of its geographic location and institutional commitment to cross-cultural and international priorities, the program at the University of Hawai'i offers special opportunities in occupational health training, research, and service. Most of the training is provided by classroom and laboratory instruction, which are tied together in seminars and in a supervised field practicum (MPH) or research thesis project (MS). The training includes breadth components in environmental health and public health.

1.2. History.

The University of Hawaii School of Public Health was awarded a NIOSH training grant in 1978 to develop a graduate level training program in occupational health. The grant enabled the School to broaden its existing instructional capacity in environmental health and to subsequently offer a program option or emphasis in occupational health. Continued NIOSH support over the years fostered a progressive growth of the training program with the most significant gains occurring between 1985-1989. At the present time there is a well-established program in place which offers occupational health training within the broader context of environmental health and public health education. All degrees awarded by the School are in Public Health, without departmental or programmatic identification.

1.3. Need.

The training program serves the continuing need for occupational health professionals in the State of Hawaii, the mainland U.S., the U.S.-Associated Pacific Jurisdictions, and the broader Asia-Pacific region. In January 1999, an informal needs assessment was conducted by surveying the membership of the Hawai'i Section of the American Industrial Hygiene Association. In response to the statement: *"There is a continuing need for a graduate level training program in Occupational Safety and Health in Hawai'i and the Pacific region."*, the average score on a scale of 1 to 5, where 1 was "disagree" and 5 "agree", was 4.6. There were 94 respondents out of 112 mailings. The results reaffirmed the value to the local industrial hygiene community of graduate occupational health training at the University of Hawai'i.

According to the Bureau of Health Professionals (BHP) of the U.S. Public Health Service, a large proportion of occupational health professionals are trained in accredited schools of public health. Approximately one-third of the graduates of the School with an emphasis in occupational health have taken positions on the mainland U.S. The BHP expects the need for industrial hygienists will continue to increase. Thus, the University of Hawaii program serves national needs as well.

Occupational health is of particular significance in the U.S.-Associated Pacific Jurisdictions and the broader Asia-Pacific region where most developing countries are experiencing a rapid increase in occupational safety and health problems. The University of Hawaii School of Public Health has, from its inception, concentrated its academic interests on international and cross-cultural health problems and considers it part of its mission to help fill the need for occupational health training in the region.

1.4. Training Candidates.

1.4.1. Admission Criteria & Procedure.

Although the degrees are awarded in Public Health, admission to the School of Public Health is by program areas. The requirements for admission to the MPH and MS programs in Environmental and Occupational Health include a baccalaureate degree in engineering, biology, chemistry, or other natural science, with an upper-division grade point average (GPA) of 3.0 or better on a 4.0 scale. Selection is also based upon relevant work experience, letters of recommendation, and the applicant's statement of purpose.

1.4.2. Source of Trainees.

Approximately 1/3 of our students are from Hawaii, 1/3 from the mainland U.S., and 1/3 from foreign countries, mainly from the Asia-Pacific region.

Training opportunities are made available in certain special sectors and programs. The heavy military presence in Hawaii is well known. With so many military personnel and families stationed here, it is not surprising that some of them would wish to continue their education at the University of Hawaii. The School of Public Health is pleased to provide this opportunity for qualified military applicants. Over the duration of the NIOSH training grant, about 11 students with an occupational health emphasis were military personnel or spouses on assignment in Hawaii.

2. Program.

2.1. Curriculum.

2.1.1. Coursework.

The occupational health training program at the University of Hawaii School of Public Health is centered on industrial hygiene, but also provides course offerings of interest to other occupational health professionals, such as physicians, nurses, and safety engineers. The training is designed primarily to prepare occupational health practitioners at the master's degree level and leads to either the Master of Public Health (MPH) degree or Master of Science (MS) degree. The program of study requires between three and four semesters with an intervening summer devoted to either a field practicum (MPH) or research (MS). Minimum degree requirements include 30 semester hours of course work, but a typical work load is closer to 36 semester hours. All students in the School of Public Health are required to take certain foundation (core) courses. The balance of the student's program is individualized to his/her interests and needs and is filled from a fairly large course selection menu.

Course selections in the MPH and MS curricula with an emphasis in occupational health are shown on the following pages:

COURSE SELECTIONS IN MPH CURRICULUM WITH EMPHASIS IN OCCUPATIONAL HEALTH

Required Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|---|-------------|-------------------|
| PH 602 | 2 | Fundamentals of Health Administration | F/S | Casken |
| PH 623 | 2 | Social Science and Public Health | F/S | Grossman |
| PH 642 | 2 | Health and Human Development | F/S | Baruffi |
| PH 654 | 3 | Public Health Statistics | F/S | Grove |
| PH 663 | 2 | Principles of Epidemiology | F/S | Katz |
| PH 681 | 2 | Environmental Determinants of Health | F/S | Menon |
| PH 788 | 2 | Seminar in Environ. & Occup. Health | F/S | staff |
| PH 791D | 3 | Advanced Public Health Practice (Fieldwork) | F/S | staff |

Occupational Health Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|--|-------------|-------------------|
| PH 683 | 2 | Occupational Health | F | Kodama |
| PH 684 | 3 | Principles of Industrial Hygiene | S | Michaud |
| PH 686 | 3 | Air Pollution, Toxics, and Control | F | Menon |
| PH 687 | 3 | Environmental Toxicology | F | Michaud |
| PH 692 | 2 | Industrial Hygiene Engineering | F | Hashimoto |
| PH 694 | 2 | Hazardous Materials Management | S | Menon |
| PH 695 | 2 | Ergonomics | S | Menon |
| PH 699 | v | Directed Reading in Occupational Health | F/S | staff |
| PH 770 | 3 | Environmental Epidemiology | F | Miller |
| PH 773 | 3 | Measurement of Environmental Factors (Lab) | S | Michaud |
| PH 792D | 2 | Advanced Industrial Hygiene Practice | S | UCB |

Other Recommended Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|--|-------------|-------------------|
| PH 658 | 2 | Computer Applications in Public Health | S | Miller |
| PH 661 | 1 | Epidemiological Study Design Critique | F/S | staff |
| PH 673 | 3 | Foundations in Community Education | F | Grossman |
| PH 766 | 3 | Org. Development in Health Systems | S | Oshiro |

ABBREVIATIONS: PH 792 is a generic course number. D designates it as an Environ. & Occup. Health course; v is for variable units; F is for the fall semester; S is for the spring semester; UCB is for University of California, Berkeley.

**COURSE SELECTIONS IN MS CURRICULUM WITH EMPHASIS
IN OCCUPATIONAL HEALTH**

Required Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|--------------------------------------|-------------|-------------------|
| PH 655 | 3 | Biostatistics I | F | Grove |
| PH 656 | 3 | Biostatistics II | S | Grove |
| PH 663 | 2 | Principles of Epidemiology | F/S | Katz |
| PH 664 | 3 | Advanced Epidemiology | S | Morens |
| PH 681 | 2 | Environmental Determinants of Health | F/S | Menon |
| PH 700 | 6 | Thesis Research | F/S | staff |
| PH 788 | 2 | Seminar in Environ. & Occup. Health | F/S | staff |

Occupational Health Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|--|-------------|-------------------|
| PH 683 | 2 | Occupational Health | F | Kodama |
| PH 684 | 3 | Principles of Industrial Hygiene | F/S | Michaud |
| PH 686 | 3 | Air Pollution, Toxics, and Control | F | Menon |
| PH 687 | 3 | Environmental Toxicology | F | Michaud |
| PH 692 | 2 | Industrial Hygiene Engineering | F | Hashimoto |
| PH 694 | 2 | Hazardous Materials Management | S | Menon |
| PH 695 | 2 | Ergonomics | S | Menon |
| PH 699 | v | Directed Reading in Occupational Health | F/S | staff |
| PH 770 | 3 | Environmental Epidemiology | F | Miller |
| PH 773 | 3 | Measurement of Environmental Factors (Lab) | S | Kodama |
| PH 792D | 2 | Advanced Industrial Hygiene Practice | S | UCB |

Other Recommended Courses:

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|--|-------------|-------------------|
| PH 658 | 2 | Computer Applications in Public Health | S | Miller |
| PH 661 | 1 | Epidemiological Study Design Critique | F/S | staff |
| PH 673 | 3 | Foundations in Community Education | F | Grossman |
| PH 766 | 3 | Org. Development in Health Systems | S | Oshiro |

ABBREVIATIONS: PH 792 is a generic course number. D designates it as an Environ. & Occup. Health course; v is for variable units; F is for the fall semester; S is for the spring semester; UCB is for University of California, Berkeley.

A TYPICAL ***MPH*** PROGRAM OF STUDY WITH AN EMPHASIS IN OCCUPATIONAL HEALTH

| <u>Course</u> | <u>Units</u> | <u>Title</u> | <u>Sem.</u> | <u>Instructor</u> |
|---------------|--------------|---|-------------|-------------------|
| PH 602 | 2 | Fundamentals of Health Administration | F/S | Casken |
| PH 623 | 2 | Social Science and Public Health | F/S | Grossman |
| PH 642 | 2 | Health and Human Development | F/S | Baruffi |
| PH 654 | 3 | Public Health Statistics | F/S | Grove |
| PH 663 | 2 | Principles of Epidemiology | F/S | Katz |
| PH 681 | 2 | Environmental Determinants of Health | F/S | Menon |
| PH 683 | 2 | Occupational Health | F | Kodama |
| PH 684 | 3 | Principles of Industrial Hygiene | S | Michaud |
| PH 687 | 3 | Environmental Toxicology | F | Michaud |
| PH 692 | 2 | Industrial Hygiene Engineering | F | Hashimoto |
| PH 694 | 2 | Hazardous Materials Management | F | Menon |
| PH 695 | 2 | Ergonomics | S | Menon |
| PH 773 | 3 | Measurement of Environmental Factors (Lab) | S | Kodama |
| PH 788 | 2 | Seminar in Environ. & Occup. Health | F/S | staff |
| PH 791D | 3 | Advanced Public Health Practice (Fieldwork) | F/S | staff |

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Relatively few students take the MS option, which would differ from the above only in the required foundation courses.

As may be seen from the above, the occupational health program option or emphasis is broadly based in that it includes elements of environmental health and public health as well. Our intention is to prepare practitioners who have the fundamental knowledge of their discipline, but who also have the versatility to deal with the broader issues of environmental health and public health. We believe that beyond providing technical training, the responsibility of graduate education is to develop the basic skills of inquiry and problem solving.

2.1.2. New Modes of Instruction.

The Hawaii Interactive Television System (HITS) and other video networks provide the University of Hawaii with a powerful communications tool with which to equalize educational opportunities for residents of Hawaii who do not have ready access or time to participate in campus-based instructional programs. HITS can reach distant learners assembled in classroom sites on other islands, and through Cable TV may also reach learners in their homes and work sites. Two of the program faculty have already given courses on HITS: Professor Menon, the foundation course, Environmental Health (PH 681); and Professor Hashimoto, Hazardous Materials Management (PH 694).

An exciting new development in curriculum enrichment took place during the current reporting period with the import of a special class titled, Advanced Industrial Hygiene Practice (PH 792D), from the Center for Occupational and Environmental Health, School of Public Health, University of California, Berkeley and the Northern California NIOSH ERC. The course, made possible by small supplemental grants from NIOSH, was conceived, proposed and implemented by Dr. Robert Spear, Director of the Berkeley program, as a means of assisting the Hawaii program. The class, offered in Spring 1996 and Spring 1997, was arranged in two-week modules: a lecture video-taped in Berkeley the first week, followed by an "in-person" presentation and discussion in Hawaii the second week. There were 6-7 different speakers who shared their expertise on topics in industrial hygiene practice and/or research. The course was enormously successful and we believe it may be an effective model for NIOSH ERCs to help other TPG directors strengthen their course offerings.

In Spring 1998, thanks again to Professor Spear and the Northern California NIOSH ERC, still another form of distance learning benefited the Hawai'i program. A regular course in the Berkeley industrial hygiene curriculum, PH 268B, Industrial Hygiene Seminar, was imported by teleconference providing a "virtual classroom" in Berkeley for our students. The course consisted of weekly seminar presentations by industrial hygiene practitioners in California, followed by presentation and discussion of industrial hygiene case studies by Berkeley and Hawai'i students. Our students and faculty were very impressed by the intensity and high quality of the course.

2.1.3. Field Training & Student Research.

The University of Hawaii School of Public Health has since its inception provided "field training" as a significant period of supervised field work designed to support the learning objectives of the discipline and the learning goals of the student. Thus, field training is considered an important component of our program. Field training activities in occupational health often include research projects. Some examples from the current reporting period are given below:

Jiang, Zhangceng., (1997). *Evaluation of asbestos abatement in Tripler Army Medical Center.*

Zhang, Guo Quing., (1997). *Evaluation of customer accessibility and completeness of Material Safety Data Sheets for paint products.*

Zhang, Z., (1997). *Evaluation of asbestos release during asbestos abatement at Tripler Army Medical Center.*

Camaddo, Charity B., (1998). *Industrial hygiene and its role in occupational health: and internship experience with the respiratory disease hazard evaluation technical assistance (RDHETA) branch at NIOSH.*

Char, Karin A., (1998). *Developing an effective EHS training program at the gas company through integration of overlapping regulatory training requirements.*

Kim, J., (1998). *Employees exposure to methylene chloride in the Toxics Unit of the City & County Water Quality Laboratory.*

Oo, T., (1998). *Blood cholinesterase level monitoring of pineapple field workers.*

Amparo, J., (1999). *A study of claim denial and medical treatment delay in the Hawai'i Workers Compensation System.*

Harris, W., (1999). *An industrial hygiene case study on an odor problem of unknown origin.*

Hom, Winifred J., (1999). *Successful implementation of a hazard communication program in Company X.*

Mizuno, Stephanie A., (1999). *A field test of the ergonomic material and safety awareness in the Food Service Industry Program project in the State of Hawai'i.*

Ogrydziak, Randal S., (1999). *Development of safe diving practices for scuba diving vessels in Hawai'i.*

Nakamura, Nolan., (2000). *Developing a chemical hygiene plan for high school X.*

Sin, Weng Hang, (2000). *Review and update of material safety data sheets at Tesoro.*

Wong, Hasina C, (2000). *Application of ergonomics in the hotel housekeeping industry.*

2.2. Faculty.

Premlata Menon was appointed as Program Director in September 1998. She received advice and guidance from Professors Arthur Kodama, Jon-Pierre Michaud, Harlan Hashimoto, and other colleagues at (a) the University of Hawai'i, (b) NIOSH Educational Resource Centers, and (c) the former Division of Training and Manpower Development, NIOSH. The program also obtains input from a community-based advisory committee comprised of four industrial hygienists, and one person each from occupational medicine, occupational health nursing, and safety engineering. Another valuable resource for assistance on curricular matters is the occupational safety and health expertise vested in the faculties of member institutions of the Asia-Pacific Academic Consortium for Public Health.

2.2.1. School of Public Health Faculty.

The key instructional faculty for the program include:

Harlan Hashimoto, M.S., D. Env.
Arthur Kodama, M.P.H., Ph.D.
Premlata Menon, M.S., Ph.D.
Jon-Pierre Michaud, M.S., Ph.D.
DeWolfe Miller, M.S., M.P.H., Ph.D.
Julius Morris, Ph.D., C.S.P. (Deceased in August 1999)

The specific instructional contributions of the individuals are shown in the COURSE SELECTION tables above.

Since the occupational health program option or emphasis resides in the framework of a school of public health, numerous faculty from other disciplines within the School contribute essential elements to the training supported by the NIOSH grant. Thus, faculty in other environmental health specialization areas as well as those in biostatistics, epidemiology, health education, public health management, etc., also comprise the instructional faculty.

2.2.2. Clinical Faculty.

Clinical faculty are non-compensated and lecture in the various occupational health courses as well as serve as resource persons and field training preceptors for students. The clinical faculty provide the “real world” component of the students’ learning experience in the program. The individuals listed below are long-time and regular contributors to the program:

William Albrecht, M.P.H., Ph.D., C.I.H. (Industrial Hygiene & Toxicology)
Thomas Cashman, M.D., M.P.H. (Occupational Medicine & Epidemiology)
Fred Hertlein, M.S., C.I.H. (Industrial Hygiene)
James Langworthy, M.D., M.O.H. (Occupational Medicine)
Barbara Germann, M.P.H., C.O.H.N (Occupational Health Nursing)
Judith Merritt, M.P.H., C.O.H.N.(Occupational Health Nursing)
Miles Onishi, P.E. (Ventilation Systems Design)
Jennifer Shishido, C.I.H. (Industrial Hygiene)
Roy Takekawa, M.P.H., C.I.H. (Industrial Hygiene)

Other Contributors:

A number of other occupational medicine physicians and industrial hygienists from the community contribute to the training program mainly as guest speakers, but do not hold formal appointments as clinical faculty.

2.3. Linkages.

In efforts to promote worker health, occupational health professionals everywhere have begun to recognize the value of interdisciplinary collaboration. We in the environmental and occupational health program have the opportunity to continue a successful partnership with health education and behavioral science faculty at the School in the area of **ergonomics**. It is our belief that most worker training in ergonomics is provided by technical staff, usually with little understanding of adult education concepts or principles. Further, it is widely accepted that while there is a plethora of available ergonomics training materials, many are not well suited for the demographics of the workforce in Hawai‘i.

Accordingly, we recently undertook two interdisciplinary projects with contracts from the Hawai‘i Occupational Safety & Health Division (HIOSH) to develop new training materials and methods to increase the number of ergonomically sound workplaces in Hawai‘i. A number of different formats and approaches to training were developed and tested. The main outcome of the projects includes an Ergonomics Training & Resource Handbook for HIOSH.

The School of Public Health has been named as a U.S. Collaborating Center of the World Health Organization to serve as a focus for health leadership development. The charter of the Center calls for the School to strengthen leadership in areas of priority health needs. These include primary health care, nutrition, environmental management, and **occupational health**.

This charter also links with a State of Hawaii initiative generated by the Governor, which creates a Pacific Health Promotion and Development Center to provide *pro bono* health service and education in the U.S.-Associated Pacific Jurisdictions. The School of Public Health serves as the Secretariat for that Center. One of the priority areas for action is in environmental health, including **occupational health**.

The WHO Collaborating Center and the Pacific Health Promotion Center serve to attract students from the Asia-Pacific region to the University of Hawaii School of Public Health and provide unique opportunities for field training in the international arena.

Both for reasons of personal ties and geographical proximity, we would like to take advantage of opportunities to strengthen linkages with the industrial hygiene group at the University of California, Berkeley. Important curricular gains would accrue to our program if the instructional arrangements described above in Section 2.1.2. can be continued and expanded.

3. Performance Outcomes.

3.1. Courses Offered.

The following courses were offered during the current reporting period. The total number of students enrolled in the classes over the three years are indicated in parenthesis.

| | |
|---------|---|
| PH 683 | Occupational Health (30) |
| PH 684 | Principles of Industrial Hygiene (19) |
| PH 686 | Air Pollution, Toxics, and Control (12) |
| PH 687 | Environmental Toxicology (24) |
| PH 692 | Industrial Hygiene Engineering (14) |
| PH 694 | Hazardous Materials Management (20) |
| PH 695 | Ergonomics (19) |
| PH 699 | Directed Readings in Occupational Health (15) |
| PH 770 | Environmental Epidemiology (7) |
| PH 773 | Measurement of Environmental Factors (18) |
| PH 792D | Advanced Industrial Hygiene Practice (8) |

The courses with single digit totals were not available every year of the reporting period.

The enrollments above included 75 students not considered to have had an occupational health emphasis. Thus the courses added breadth to the training of other students in environmental health and from elsewhere in the School and University.

3.2. Graduates.

During the three years of the current reporting period, the following students graduated from the program with an emphasis in occupational health.

| 1997-98 | 1998-99 | 1999-00 |
|---------------------------|--------------------|-------------------|
| Busquets-Cortina, Lizette | Char, Karin | Hall, James |
| Camaddo, Charity | Okiyama, Eugene | Hom, Winifred |
| Efhan-Cruz, Marlene | Stubbings, Michael | Mizuno, Stephanie |
| Harris, Greg | Amparo, Joselito | Nakamura, Nolan |
| Jiang, Zhangceng | DeMesa, Charles | Sauer, Samuel |
| Kanehisa, Dale | Harris, William | Sin, Weng Hang |
| Kim, Janet | Ogrydziak, Randal | Wong, Hasina |
| Oo, Thein | Stedman, Richard | |
| Randolph, Ronda | Ze Ya, Aung | |

Graduates of the program with an emphasis in occupational health most commonly obtain industrial hygiene positions in government and the private sector. Some assume positions in loss control for insurance companies. A number of physicians and nurses have taken the MPH degree with an emphasis in occupational health as part of their certification credentials in occupational medicine and occupational health nursing. The program has done well in training "generalists," if not "specialists" in industrial hygiene. Although many graduates have the opportunity to pursue careers in industrial hygiene, others take positions with environmental health titles, which also require them to assume occupational health responsibilities.

Although their training is not considered part of NIOSH's primary mission, our foreign graduates, by virtue of returning directly to key posts in academia and health and labor ministries have the potential for making a greater impact on behalf of occupational safety and health in their home countries than most of their American counterparts in the U.S.

3.3. Outreach & Service.

During the current reporting period, program faculty made eleven 1-2 hour seminar/workshop presentations on various occupational safety and health topics. A total of 600 persons attended these sessions.

Program faculty continue to be active in local safety and health organizations.

4. Evaluation of Program.

In January 1999, a survey was conducted of recent graduates of the program to assess their impressions of occupational health training at the University of Hawaii. Questionnaires were mailed to all U.S. graduates for whom current addresses could be obtained. The results of the survey are summarized below:

SURVEY OF GRADUATES (1993-1998) WITH AN EMPHASIS IN OCCUPATIONAL HEALTH

Number surveyed = 45

Number respondents = 30

Ratings expressed as percent of respondents.

| Assessment Criterion | Rating | | | |
|--|---------------|-------------|-------------|------------------|
| | <u>Poor</u> | <u>Fair</u> | <u>Good</u> | <u>Excellent</u> |
| Quality of instruction | 0% | 3% | 47% | 50% |
| Knowledge of faculty | 0% | 3% | 30% | 67% |
| Range of courses | 0% | 13% | 64% | 23% |
| Quality of courses | 0% | 3% | 50% | 47% |
| Quality of field training | 0% | 13% | 47% | 40% |
| Academic Advising | 0% | 7% | 43% | 50% |
| Overall rating of program | 0% | 0% | 57% | 43% |
| Adequacy of program for present job | 0% | 7% | 39% | 54% |

The results were similar, possibly even more positive, than those obtained previously for the first 15 years, up to 1993. The findings validate our own assessment of the program. While every effort is made to assure the quality of instruction and the courses, we feel the range of courses offered is necessarily limited by the available faculty. Still, 87% of the graduates scored the range of courses "good" to "excellent". All of the assessment criteria were rated "good" to "excellent" by 87% to 97% of the respondents. The global ratings of the program and its adequacy in preparation for jobs were very positive.

5. Program Benefits from Grant.

Award of the renewal and continuation grants for the period of this report (07/01/97 - 06/30/00) permitted the University of Hawaii School of Public Health to maintain an uninterrupted program emphasis in Occupational Health.

Except for one class, all of the scheduled courses in the curriculum were offered utilizing regular, part-time, and volunteer instructors. The grants enabled the program to provide token compensation each budget year for several part-time instructors.

Small stipends were made available for students with an expressed or demonstrated interest in occupational health. Over the period of this report, 17 students received a year of stipend support of between \$2,000 - \$4,000.

The cost of laboratory supplies and equipment repair were partially defrayed by grant monies.

In summary, without the recent NIOSH training grant awards, instruction in occupational health at the University of Hawaii School of Public Health would have reverted back to pre-1985 levels; i.e., where a number of occupational health courses would have been offered, but not in sufficient numbers to represent a program. Thus, continued NIOSH-support has been very important for the maintenance of the quality of the program.

End of Report



DEPARTMENT OF HEALTH & HUMAN SERVICES

Memorandum

Date September 12, 2000
From Principal Engineer, OECSP
Subject Final Progress Report for entry into NIOSHTIC/NTIS for
NIOSH Training Grant No. T01 CCT 910436
To William Bennett, IRB, EID (C-28)

The enclosed report has been received from the Program Director to document work performed during the specified grant project period. The following information applies to the designated Training Project Grant (TPG):

Title: Occupational Health Training Program

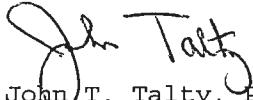
Project Director: Premlata Menon, Ph.D.
School of Public Health
University of Hawaii
Honolulu, HI 96822

Grant No.: T01 CCT 910436

Project Period: 7/1/97 - 6/30/2000

Please place the report in DIDS and I also recommend it for entry into NIOSHTIC and submission to NTIS.

Thanks for your assistance.


John T. Talty, P.E., DEE

cc: S. Board/B. Kuchinski, OECSP

Enclosure

fpr.uhi

SMISCF115
SMISM035
AHUTAHOO

THE GDI GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
(SCREEN NO.1)

02/06/01
17:47

AWARD NO.....: 910436 PROGRAM CODE.....: P01 AWARD DATE.: 05/12/1996
CPS EIN...: 1-9996000354-A1 AWARD TYPE.....: G FED CAT NO....: 93.263
CIO CODE.....: NICSH OBJ CLASS.....: 41.21 PHS LIST NO: CL-042-T00
PROJ PER. FROM: 07/01/1994 PROJ PER. TO: 06/30/2001 ANNOUNCEMENT NO.: 94048
PREV AWARD NO:
PROGRAM NAME: AUTHORIZATION: 42 USC 241 - P.L. 91-596

GRADUATE TRAINING PROGRAMS

GRANTEE NAME....: UNIVERSITY OF HAWAII
BUSINESS OFFICE: CONTRACTS & GRANTS MANAGEMENT
STREET.....: 1330 LOWER CAMPUS ROAD
CITY.....: HONOLULU
STATE: HI ZIP CODE: 96822- PHONE: (808) 956-7800-

PROJ DIRECTOR...: DR. PREMLATA MENON
DEPARTMENT.....: PUBLIC HEALTH SCIENCES
STREET.....: 1960 EAST-WEST ROAD
CITY.....: HONOLULU
STATE: HI ZIP CODE: 96822- PHONE: (808) 956-5740-
DISPLAY PF10-RETURN GRANT AWARD MENU PF16-MAIN MENU

GMISER15
GMISER039
AHC7RH00

THE CDC GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RETRND
(SCREEN NO.2)

12-05-01
17:47

AWARD NO.: 910436 SPECIALIST CODE:.....: SW1 FUND DISPLMT:.....
PMS PAY CODE:... P INSTITUTION CODE:.... 0810005 PPG DESPCTORS: 19--10
ETHNIC CODE:.... P PMS CLOSEOUT DATE:
CLOSEOUT FIRST LETTER DATE: CONTAINS RESEARCH ATTIVTY(S): N

GRANTS MANAGEMENT OFFICER:.. LISA T. GARBARINO
PROJECT OFFICER:..... JOHN TALTY
PROJECT OFFICER TITLE:.....

REMARKS:

12 MONTH NO-COST EXTENSION TO JUNE 30, 2001

FOOTNOTES:

ATTACHED: Y

HUMAN EXEMPTION: IRS DATE:

IRS DUE DATE:

DISPLAY

PE10-RETURN GRANT AWARD MENU

PE10-MAIN MENU

0010226
0010227
0010228

THE FED GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD PERIOD
(SCREEN NOTE)

01/06/11
11:47

AWARD NO.: 011436 YEAR.....: 8 FISCAL YEAR.....: 1999
ACTION TYPE...: 6 AMEND NO.: 1 ACTION DATE: 01-12-2000

APPROVED BUDGET (1): GRANT FUNDS ONLY (1/1): Y

| | |
|-----------------------------|--------|
| SALARIES/WAGES.....: | 16,592 |
| FRINGE BENEFITS.....: | 4,480 |
| TOTAL PERSONNEL POSTS....: | 21,062 |
| CONSULTANT POSTS.....: | |
| EQUIPMENT.....: | |
| SUPPLIES.....: | 1,272 |
| TRAVEL.....: | |
| OTHER.....: | |
| CONTRACTUAL COSTS.....: | |
| TRAINEE EXPENSES.....: | |
| TRAINEE STIPENDS.....: | 22,300 |
| TRAINEE TUITION & FEES....: | |
| TRAINEE TRAVEL.....: | |
| TOTAL DIRECT POSTS (TA): | 45,135 |

DISPLAY FF10-RETURN GRANT AWARD MENU FF14-MAIN MENU

GMISI115
GMISI125
AHOTAHOO

THE CDC GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
(SCREEN NO. 4)

12/05/01
17:47

AWARD NO: 310436 YEAR.....: 5 FISCAL YEAR.....: 1999
ACTION TYPE...: 6 AMEND NO.: 2 ACTION DATE: 01/18/2000

APPROVED BUDGET (2):

| | |
|------------------------------|--------|
| INDIRECT COST RATE..... | 8.0000 |
| INDIRECT COST RATE CODE..... | 3 |
| INDIRECT COSTS (FA) | 3,610 |
| SEIR FEE..... | |
| TOTAL APPROVED BUDGET..... | 48,735 |
| NON FEDERAL SHARE..... | |

AWARD COMPUTATION FOR GRANT:

| | |
|--------------------------------|--------|
| FED SHARE/PHS ASSISTANCE..... | 48,735 |
| UNOB FINANCIAL ASSISTANCE..... | 893 |
| CUM PRIOF AWARD THIS BUD (FA): | 47,752 |
| AMOUNT THIS ACTION (FA) | |

DISPLAY

PF10-RETURN GRANT AWARD MENU

PF16-MAIN MENU

GMISPI25
GMISMI41
AH07AH00

THE GDC GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
(FSR)

02/05/01
12:47

AWARD NO: 910436 YEAR: 5
UNDELEGATED AMOUNT: 993

| UNCE YEAR FROM | UNCE AMOUNT |
|----------------|-------------|
| 3 | 982.94 |
| 2 | 1.06 |

PF10-RETURN GRANT AWARD MENU PF16-MAIN MENU

GMISPI25
GMISM101
AHCTAH0

THE CDC GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
(SCREEN NO. 5)

11/05/91
17:47

AWARD NO: 910436

YEAR: 5

FISCAL YEAR: 1990

APPROVED DIRECT ASSISTANCE BUDGET:

PERSONAL SERVICE.....
TRAVEL.....
VACCINE.....
OTHER.....
OTHER DESCRIPTON:
TOTAL DIRECT COSTS (DA)
UNOB DIRECT ASSISTANCE.....
SUM PRIOR AWARD THIS BUD (DA):
AMOUNT THIS ACTION (DA)

COMPETITIVE ACTION (Y/N): N

DISPLAY

PF10-RETURN GRANT AWARD MENU

PF16-MAIN MENU

GMTSP125
GMTSK110
PHOTAHG9

THE CDC GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
(SCREEN NO. 6)

02/05/01
17:47

AWARD NO.: 910436 YEAR: 86 FISCAL YEAR: 1986

CAN AWARD DATE ALI010 CODE FV1-CAN AMT FIN ASSIST AMT DIR ASSIST
05/26/1999 B-93 G 634-6016677 100,000 0

DISPLAY

PF10-RETURN GRANT AWARD MENU

PF16-MAIN MENU

EMTSE125
EMTSM033
AROTAH00

THE CDT GRANTS MANAGEMENT INFORMATION SYSTEM
GRANT AWARD RECORD
SCREEN NO. 73

02/03/01
17:47

AWARD NO.:..... 910456 YEAR:..... 6 FISCAL YEAR:.... 1999
BUD PEP FROM: 07/01/1993 BUD PEP TO: 06/30/2001 PROGRAM INCOME:.... 0
PROJ PEP FROM: 07/01/1994 PROJ PEP TO: 06/30/2001
RECOMMENDED FUTURE SUPPORT:

YEAR TOTAL DIRECT COST YEAR TOTAL DIRECT COST YEAR TOTAL DIRECT COST

| FREQ | REPORT | DUE DATE | REC DATE | LTR 1 DATE | LTR 2 DATE |
|------|----------|------------|----------|------------|------------|
| A | FSR | 09/30/2001 | | | |
| | PRO-REP1 | 10/30/2001 | | | |
| | PRO-REP2 | | | | |
| | PRO-REP3 | | | | |
| | PRO-REP4 | | | | |
| | PRO-REP5 | | | | |
| | PRO-REP6 | | | | |
| | PRO-REP7 | | | | |
| | PRO-REP8 | | | | |

DISPLAY F10-RETURN GRANT AWARD MENU F16-MAIN MENU