FINAL PROGRESS REPORT

Project Title:	Graduate Training Program in Occupational Medicine
Project Period:	7/1/03-6/30/09
CDC Grant Number:	#T01/OH008628
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Date of Report:	7/21/09

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GRANT #T01/OH008628

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III. ABSTRACT

We conducted an innovative supervised practicum year of training in occupational medicine, which met the training requirements for certification by the American Board of Preventive Medicine in Occupational Medicine. This "external" program uses on-job, on-campus techniques and was designed for physicians who already have substantial clinical training including those who are making a mid-career shift into Occupational Medicine. Residents must be employed full-time in a suitably supervised position in the field of Occupational Medicine. The residents are required to have already completed an MPH or equivalent degree before entering the program. The program incorporates training at the University of Pennsylvania for three days per month; faculty visits to the resident's worksites, a series of in-depth projects which develop skills in selected areas, and supervised activities in occupational medicine at the residents' place of employment. During the 6-year period of this grant, 45 physicians graduated from the program, of which 43 completed the majority of their training at locations distant from Philadelphia. 34 of these trainees were directly supported from the training grant. The quality of the program is indicated by strong performance using various independent evaluation that included improvements in self-assessed ratings of skills before and after training, faculty ratings of resident performance, and superior performance on the American Board of Preventive Medicine Certifying examinations compared with other Occupational Medicine Residency trainees. Residents also gave high ratings when asked questions relating to whether the program met their training needs. All program graduates have remained in employment in occupational medicine.

IV.SIGNIFICANT FINDINGS

We continued to implement and improve our residency training which differs from other existing programs to train Specialists in Occupational Medicine in its use of innovative on-job, on-campus methodology.

The program has graduated 45 residents over the period of the grant. Forty three of these residents undertook their supervised clinical Occupational Medicine training, primarily or entirely, at affiliated training sites distant from University of Pennsylvania Medical Center, two at the University of Pennsylvania. Thirty four of these residents were directly supported by NIOSH grant funds.

NIOSH funds were used for core support for educational functions and to support applicants

- for whom residency training would otherwise create substantial fiscal and logistical difficulties, and/or
- who worked in under serviced locations, and/or
- Were providing occupational medicine support for underserved populations.

The program was of high quality based on three independent measures of evaluation:

- Resident assessments of competence gained and of satisfaction with the training
- Faculty assessment of resident performance
- Performance of program graduates on the American Board of Preventive Medicine Examination
- Results for Penn Graduates in a National Survey of Occupational Medicine Residency Graduates.

OUTCOMES/RELEVANCE/IMPACT

Residents completing the training had a very high rate of retention in the practice of Occupational Medicine. Of the 45 residents who completed the program between June 2003 and June 2009, 44 are still primarily engaged in Occupational Medicine specialty practice, the whereabouts of 1 resident is currently unknown.

Trainees came from all regions of the country. Over half of the graduating physicians practice in locations outside the 25 largest SMSAs.

The program is fiscally efficient in terms of dollars invested by the Federal Government per physician trained, compared with other training programs for occupational Physicians. The program is designed along economically rational lines, in that residents pay for their training while they are compensated for the work they do. This model has been promoted as a future direction for graduate medical training in many fields, yet there are few if any other examples available that address the feasibility of such training.

V. TECHNICAL REPORT

History and Objectives of the Program

The program commenced in the 1997-98 academic year at the Thomas Jefferson Hospital in Philadelphia. NIOSH funding commenced on 7/1/1998. In 1999 the program changed its institutional base to the University of Pennsylvania School of Medicine, also located in Philadelphia. Since the inception of NIOSH funding the program has trained 88 practicum year residents, 45 in the grant period from 7/1/03 through 6/30/09, through an innovative external track where qualified physicians residents (who remain in the employ of their current employer) train through the University of Pennsylvania Health System.

This is an innovative program which addresses national as well as regional occupational medicine training needs. We address an overall need for well-trained physicians in the field, a need for a program to give better access to quality training especially for physicians making a mid-career shift into Occupational Medicine, a need for improved training to address perceived deficiencies by the market, as well as regional needs.

Our program draws upon a previously untapped source of high quality and motivated trainees, physicians who are already working full-time in Occupational Medicine, but who lack formal supervised training in the specialty. It has been argued that there is a paucity of qualified applicants to fill the residency positions available in Occupational Medicine. However our experience has been that there are ample highly qualified applicants once barriers to the accessibility of practicum year residency training are overcome. The external track of our residency extends access to residency training to those who are already practicing in the field, and who are unable to access existing training despite motivation to be trained, and the presence of resources to support an excellent training experience at their practice location. A prospective resident does not need to terminate existing employment or take prolonged leave of absence to enter our program. This is particularly beneficial in the contemporary work-climate where there is often little certainty of long-term employment and also for residents with family responsibilities.

Because of the limited number of residency training programs in occupational medicine and their concentration in large metropolitan areas, it is often difficult for interested physicians to find a training program in occupational medicine near their location. Medical manpower studies have shown that physicians tend to practice where they have taken residency training which distorts medical manpower distribution. The availability of an accessible training program for physicians from smaller and middle-sized cities, and from underserved areas with respect to occupational medicine training and practice facilitates a better distribution of occupational physicians to areas of need and to otherwise underserved populations.

In addition to providing core support for educational functions, we use NIOSH funds specifically to support applicants for whom residency training would otherwise create substantial fiscal and logistical difficulties, who are working in underserviced locations, and/or are providing occupational medicine support for underserved populations.

Our program is also designed to address perceived deficiencies in the preparation of residency-trained physicians, which are thought, to impact on their utility in practice.

These issues include:

- The number of residents being trained is too small for the need.
- Many residents are not interested in careers in the applied practice of occupational medicine serving the worker population.
- At the conclusion of their training many residents have little experience/skill in handling practical occupational medicine issues at the workplace.
- Better access is needed for interested physicians to take residency training in occupational medicine.

By addressing these issues we aim to train Occupational Physicians who can have maximum impact on the health of the workforce.
This program uses innovative educational methods and establishes a successful new model for training in the field of preventive medicine. Major innovative aspects include:

- the use of on-job, on-campus techniques to allow residents to train while at workplaces which serve needy working populations, outside the limited number of cities where traditional occupational residency training programs are located: and
- the development of an economically efficient model of training: and the organization of the practicum training into subject area rotations which ensures that adequate attention is given to developing the diverse range of skills required of the competent Occupational Medicine specialist.

Our program is fiscally efficient from a number of points of view. The external track resident is able to stay in his or her existing employment and thus will not have to relinquish salary and benefit provisions to undertake training. For residents outside the greater Philadelphia area there is no need to relocate themselves (and potentially family) for the period of training. Savings on the above costs are partially offset by the costs of tuition. Although the program is very intensive of faculty time, the ability to train up to eight external residents at one time leads to efficient use of time. The training experience is enriched by sharing the experiences of this number of residents, and through participative experiences. Training makes efficient use of the existing infrastructure for applied occupational medicine activities available at the facilities where residents work, supplemented and complemented by specific training opportunities available at the University of Pennsylvania Health System and the University of Pennsylvania. Traditionally, Occupational Medicine practicum year residents have been employed by the training institution, including during extended periods when they have been assigned to work in industry, in what has been described as "the real world of work". Our program makes use of the workplaces where a physician is already working for the purposes of the training experiences. Our trainees can also take clinical training rotations at the University of Pennsylvania Medical Center training to obtain or improve competencies in particular clinical aspects of Occupational Medicine.

Using competency based training and on-job, on-campus techniques we have been able to establish a successful competency-based external residency program, which satisfies the supervised practicum year training requirements of the ABPM and is fully accredited by the Accreditation Council for Graduate Medical Education (ACGME).

Educational Program

The residency is under the aegis of the Hospital of the University of Pennsylvania (HUP) which is responsible to the Accreditation Council for Graduate Medical Education (ACGME) for ensuring that the general residency requirements are met. The University of Pennsylvania Health System (UPHS) Graduate Medical Committee has reviewed and approved the training program described here. The residency program is administratively located in the Department of Emergency Medicine, in the School of Medicine.

The leadership of the University of Pennsylvania Occupational Medicine residency consists of a Director and Associate Director who are core faculty, adjunct and supporting faculty each of who have responsibilities with respect to the competency modules, clinical faculty and preceptors responsible for training rotations, a committee of program faculty, and the Residency Advisory Committee. Each training site must have a suitably credentialed, locally based site supervisor.

Training consists of 36 days of didactic training in Philadelphia, a series of in-depth projects in each of five specific competency module areas, clinical and practical training at the resident's employment site and at least four visits to each site by core, Philadelphia-based faculty.

The didactic program is divided into six competency modules. These are a general competency module and five specific competency modules covering the areas of population occupational medicine; the workplace; the worker; hazards, risk assessment and risk communication; and corporate management. The core program faculty and their areas of responsibility for development and evaluation of resident competencies by area, and the full-time Occupational Medicine clinical faculty are listed in Appendix A.

Competency Objectives and Educational Plans

The training program is competency-based. The competency objectives were developed uniquely for the program with substantial input from program faculty and members of the Residency Advisory Committee (RAC). They have been designed to incorporate the list of Program Requirements for Residency Education in Preventive Medicine for Occupational Medicine (ACGME), and the content areas for the American Board of Preventive Medicine certifying examination in Occupational Medicine. They were developed with careful reference to the American College of Occupational and Environmental Medicine Competencies. The competencies are updated periodically. A full listing of the competency objectives for program graduates is available on request. The desired competency profile differs substantially from that used in other residency programs particularly in the area of organizational management. Our program gives relatively greater emphasis to this area because of our belief that the skills required to manage organizational issues such as interacting with individuals outside medicine, including labor and management, and in understanding the business of health care are essential to achieving success in Occupational and Environmental Medicine.

At the beginning of the supervised practicum year program each resident completes a self-evaluation against each competency objective. The self-ratings are reviewed by the faculty preceptor and in the case of external residents the site rotation supervisor in order to ensure that they are reasonably realistic. On the basis of the self-evaluation (revised as necessary after review by the supervisor and the faculty preceptor) an educational plan for the year is developed. The educational plan includes identification of five major projects (one in each of the five specific competency modules), additional educational experiences to strengthen the competency base, clinical areas for strengthening (through case presentations on preceptor site visits, grand rounds or journal club presentations or by additional clinical experiences), a plan for progressive assumption of responsibility and, as necessary, rotations or experiences at the University of Pennsylvania or other sites. Progress against the educational plan is monitored on at least four intervals through the year by the resident's faculty preceptor.

The Core Instructional Program in Philadelphia

The core instructional program is arranged around the 6 competency-based modules. The competencies in the general module are addressed throughout the year. The five subject-specific modules are addressed in successive two-month periods. As part of each module, each resident must complete and present a project demonstrating substantive application of the required skills utilizing the populations and resources available at their location. The 2-month modules can be considered to roughly parallel subspecialty rotations within a conventional residency.

The didactic program takes place in Philadelphia over 3 full days (a contiguous Thursday, Friday and Saturday) each month.

At each monthly session in Philadelphia there are two journal club sessions in which a key recent article is analyzed in-depth. After the first month a resident presents each article. There are also two grand-rounds presentations monthly, usually given by residents, which are centered on a patient they have managed or a challenging situation they have encountered, there are also visiting speakers, usually eminent researchers in the field. Two course series of lecture-discussions are woven throughout the year.

One is a comprehensive survey of clinical toxicology. The other series is focused on practical skill development in epidemiology and biostatistics to help residents prepare for their required epidemologic project in the population occupational health module, for which they must manage and analyze their own data set.

The first month in Philadelphia is largely devoted to an overview of occupational and environmental medicine, an introduction to the program, identification of project topics, socialization, and to skill development in communication and in utilizing information resources. The final session in Philadelphia is mainly devoted to subjects or skill development needs identified by residents and/or faculty during the year as needing more attention. The five subject modules incorporate a variety of adult learning techniques. For example; in addressing occupational and environmental health strategies we have used case studies of selected corporations; in discussing ethical concerns and interpersonal relations we have had each resident bring an issue involving them for analysis and discussion; in developing media communication skills we have an extensive videotaped sessions in a TV studio where each resident role-plays in several situations; and in discussing Independent Medical Examinations each resident brings a report he or she has written for analysis. We also make extensive use of visiting instructors, such as a full day with a Professor of Management during the organizational management module. Discussion and interaction are considered critical elements of learning and are strongly encouraged during all of the sessions. The variety of activities is designed to develop the required competencies and to enable the faculty to evaluate the competencies of the individual resident.

On the final day of each module residents present their projects. The projects must address substantive real-life issues, and must involve application of skills by the resident, and cannot be limited to a literature review. Projects must also be useful to the organization employing the resident and must not just be an "educational exercise". For example, in the organizational management module, the topics that have been addressed by a class might include: a business plan for a clinic expansion, a cost benefit analysis for a health promotion program, the development of a strategic plan for an occupational health and safety group, the development of a new infectious disease policy for a hospital, a marketing plan for a drug and alcohol program, a patient satisfaction study, and a detailed response to an RFP for clinical occupational and environmental health services.

The training at the resident's site of employment is supervised by both a site supervisor and a faculty preceptor. The site supervisor reviews, facilitates, monitors and evaluates the day-to-day clinical and preventive activities of the resident. The faculty preceptor visits the work site four times a year. At these visits the preceptors observes the clinical and interpersonal skills of the resident, discusses patient management, discusses progress on projects, meets with the resident and the site supervisor together, reviews the residents progressive assumption of responsibility and reviews any additional skill developing experiences. Examples of additional experiences arranged for selected residents have included participation in an OSHA inspection, experience at a clinic specializing in occupational skin disease, participation in the investigation of a recreational boating tragedy, experience with an employee assistance program, and various supervised clinical activities at the University of Pennsylvania Medical Center.

The modular curriculum structure was designed, in part, to allow residents to complete the program in two years if necessary, given the various demands on their time. However, during the initial 5 years of the grant all but two residents have satisfactorily completed the program in one year.

Resident Supervision

Each resident has three levels of supervision for different aspects of the training program.

1. *A full-time faculty Preceptor* who is either the Program Director or the Associate Program Director. These individuals have overall responsibility for the program and the progress of the residents
2. *One or more Faculty Supervisors* for each competency module, who are faculty members at the University of Pennsylvania. The faculty supervisors evaluate the residents' achievement of the competency objectives for that module.
3. *Site or Rotation Supervisors* who are suitably qualified physicians whose credentials are reviewed as part of the residents' application process.

Resident Competency Evaluation

The design of the program ensures that each resident is evaluated for all of the competency objectives and that the satisfactory performance of each resident against each of the program competency objectives is documented before graduation from the program. The active demonstration of competency is demonstrated in a variety of ways including by participation in exercises, presentations, completion of required reports and projects and by practical demonstration of required skills.

Evaluation of Program Outcomes Over the Grant Period

Results of outcome measures are presented below referable to the years 2003- 2008 or 2003-2009 as appropriate. The program office, through the Residency Coordinator maintains contact with program graduates, generally through the use of E-mail. Thus we have current information on practice type, location and career progression for 44 of the 45 program graduates from the 2003-2009 period. Appendix A presents the program graduates over the grant period.

Training outcomes

For residents entering the program during the years 2003-2009:

Number of Residents accepted into the program 2003-2009	46
Number of accepted residents entering program 2003-2009	45 (98%)
Number of entering residents graduating from program 2003-2009	45 (100%)
Residents 2003-2009 currently employed in Occupational Medicine	44 (1 unknown)
Entering 2003-2008 eligible sit for ABPM certification examination	38
Entering 2003-2008 sitting for ABPM examination by Nov 2008	36 (95% entering)
Entering 2003-2007 passing ABPM examination by Feb 2008	34 (90% entering)

Current geographic location of employment of the 38 2003-2008 program graduates

Northeast (MA-1, CT-4)	5
Midatlantic (NJ-2, PA-3, MD-2, DC-1, VA-1)	9
Midwest (IL-3, OH-3, MO-1)	7
Mountain & Southwest (NM-2, TX-1)	3
Southeast (GA-1, NC-1, LA-1, SC-1 AR-1)	5
West Coast & Hawaii (CA-3, OR-4, HA-1, WA-1)	9
Unknown	1

Many of our graduates are practicing in smaller cities, rather than the largest population areas, thus meeting one measure of our objective that residents practice in area of need. Although this is difficult to measure directly, we can examine the proportion of graduates practicing within or outside of the 25 largest Standard Metropolitan Statistical Areas (SMSAs), since these represent the largest aggregated population centers. For the 38 program graduates from 2003-2008 whose practice locations were known, the current practice sites are:

Within the 25 largest SMSAs	16

Outside the 25 largest SMSAs	22

Current type of employment for the 38 2003-2008 program graduates

Industry	4
Government	3
University	2
Hospital System based	13
Occupational Medicine Clinic based	15
Unknown	1

Program Quality Measures

i) Before and After Self Assessments against Desired Competency Outcomes

Appendix B presents the results of the before and after self-assessments and the rating as to how well the program met the residents needs for the 2006-2007 and 2007-2008 residency trainees. Results are given for the aggregate of scores for all competency objectives and for the collection of competencies under the six major program competency objective categories. The self-evaluation results indicate that the program has been rated very highly both in terms of a positive change in all groups of competencies and in satisfaction with the training program. Faculty members believe that the ratings are realistic, because the skills rated lowly at the start of the year did not appear to be well-developed at that time, and because subjects given low ratings at the end of the program accurately reflected subjects which received less attention during the training year.

ii) Scores in ABPM Certification Examination. The scores obtained by program graduates taking the ABPM examination allow us to evaluate the performance of our residents compared with the benchmark of national mean scores achieved by all graduates of Occupational Medicine Residency program. Since scores are available for each of the twelve component subject areas of the examination, the scores also enable us to evaluate whether there are any areas of relative weakness for program graduates. Of our graduates who have sat 86% passed on the first attempt. This compares with the national average ABPM pass rates for candidates who have completed an occupational medicine residency program, for 1998, 1999, 2000 and 2001- respectively of 73%, 71%, 61% and 63%. The mean scores obtained by program graduates for 2004 to 2008 for the two core areas of the examination (core Preventive Medicine and Occupational Medicine) and the 12 tested content areas are presented in Appendix C. It is seen that program graduates score well above the national means for both core areas of the examination, and also for all twelve content areas of the examination. This indicates that the program delivers both superior and well- balanced training.

iii) Evaluation by Program Graduates as to whether training Addresses Current Practice Requirements and as to the Adequacy of the Training

Baker et al (2007) performed a national survey of graduates within the last 10 years from nine Occupational Medicine (OM) residency program to evaluate the effectiveness of current OM residency training. The University of Pennsylvania was one of the 9 studied programs and we have been able to obtain that data and compare it with the data fro the entire group. The national survey results showed that OM residency graduates over the last 10 years were highly satisfied with OM residency training, with the training generally meeting practice needs. The data for graduates from the PENN residency (Appendix D) showed substantially higher degree of satisfaction than the national benchmark for all studied items with the exception of aerospace Medicine. We believe that the result for aerospace medicine reflected that 31% of the National Sample, but none of the PENN graduates, were also board certified in Aerospace Medicine.

Taken together the results of the program quality measures show that the PENN Occupational medicine residency is providing training that is highly relevant to practice needs and that is of superior quality when benchmarked against other programs.

VI: Publications of Core Faculty and Residents for 2003-2009

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Appendices

Appendix A. Program Faculty			
Faculty	***Role***	***Special Expertise and Competence***	***Responsibility for Competency Areas***
Edward Emmett, M.B., B.S., M.S.	Director/Core Faculty/Preceptor	Occupational Medicine Policy, Clinical Occ Medicine, Occ Dermatology	General, Clinical Occ Med.
Jeffrey Erinoff, D.O., M.P.H.	Adjunct Faculty	Clinical Occupational Medicine, Industrial Hygiene	Workplace, Clinical Occ Med.
Lloyd Tepper, M.D., Sc.D.	Adjunct Faculty	Corporate Occupational Medicine, Clinical Toxicology, Epidemiology	Population Occ Med.
Robert Bonner, M.D., M.P.H.	Adjunct Faculty	Medical Management of Disability Placement of Handicapped/Impaired	Worker
Philip G. Lewis, M.D., M.P.H.	Adjunct Faculty	Safety Health & Environmental Programs, Risk Assessment	Environmental Hazards, Risk Assessment and Communication
Judith McKenzie, M.D., M.P.H.	Associate Dir/Core Faculty/Preceptor	Epidemiology & Biostatistics Occupational Medicine	Population Occ Med
Marcia Comstock, M.D., M.P.H.	Adjunct Faculty	Corporate Health Management	Organizational Management
Natalie Hartenbaum, M.D. M.P.H.	Adjunct Faculty	Fitness for duty. Clinical Occupational Medicine	Worker
Francis Shofer, Ph.D	Supporting Faculty	Epidemiology & Biostatistics	Population Occ Med
Elizabeth Genovese, MD, MPH	Adjunct Faculty	Functional Capacity Evaluation/IME's	Worker

APPENDIX B Results of Before and after Residency Self-Assessment Against Competency Objectives and Whether Program Met Training Needs

Scales: 1 not competent to 5 competent at level of skilled OM specialist.
1 needs not addressed at all to 5 needs fully addressed

Competency Areas	Class of 2006-2007			Class of 2007-2008		
	Before Program	After Program	Program Met Needs	Before Program	After Program	Program Met Needs
General and Clinical Competencies(28 Items)	3.83	4.76	4.69	3.56	4.78	4.86
Workplace; Hazard Recognition, Evaluation & Control (43 items)	2.80	4.54	4.61	3.00	4.69	4.79
Worker: Disability & Work Fitness (31 items)	3.03	4.66	4.66	3.21	4.75	4.71
Organizational & Health Care Management (19 items)	2.72	4.69	4.81	3.10	4.80	4.98
Environmental Health, Risk Assessment & Risk Communication (22 items)	2.46	4.46	4.71	2.83	4.71	4.87
Population Based Occupational Medicine (33 items)	3.06	4.68	4.76	3.18	4.83	4.91
Overall Average	2.98	4.59	4.69	3.15	4.73	4.85

Appendix C Program Graduate Performance in ABPM Certification Examination 2004-2007			
	Mean Minimum Passing Score	Mean National Scores OM Residency Trained Physicians	Program Candidates N=35**
Core Exam	450	525	584
Occupational Medicine Specialty	450	594	738
Core Content Area Quartile* Rank			
Health Services Administration		2.2	2.5
Epidemiology & Biostatistics		2.2	2.7
Clinical Preventive Medicine		2.3	2.9
Behavioral		2.4	2.8
Environmental		2.8	3.2
OM Content Area Quartile* Rank			
Disability Management & Work Fitness		2.6	3.0
Workplace Health & Surveillance		2.7	2.9
Hazard Recognition, Evaluation & Control		2.8	3.1
Clinical Occupational Medicine		2.5	3.3
Occupational Health Program Management		2.5	2.8
Environmental Health & Risk Assessment		2.7	3.1
Toxicology		2.7	3.1
*1 is lowest, 4 is highest score (quartile) **Some graduates from previous years took the examination during this period			

Appendix D Results of National Survey of Graduates. How well did Occupational Medicine residency prepare you, by competency. Results for PENN and national benchmark (Baker et al 2007). Rating Scale: 1=not prepared,.... 5 well-prepared		
	U Penn graduates	National Sample (9 programs)
Toxicology	4.60	4.14
Epidemiology	4.60	4.14
Professionalism	4.60	4.38
Medical Knowledge	4.50	4.15
Workplace Health & Surveillance	4.47	4.14
Hazard recognition, evaluation, & control	4.47	4.20
Biostatistics	4.47	3.94
Regulation & Government Agencies	4.40	3.48
Interpersonal Skills & Communication	4.40	3.92
Environmental Health	4.36	4.13
Preparation for Occupational Medicine section of ABPM exam	4.33	4.10
Environmental Risk Assessment	4.27	3.84
Disability Management and Work Fitness	4.20	3.78
Health Services Administration	4.20	3.43
Management and Admin.	4.20	3.51
Clinical Occupational Medicine	4.07	3.90
Health Promotion and Clinical Prevention	4.07	3.78
Clinical Preventive Medicine	4.07	3.71
Behavior aspects of health	4.07	3.67
Preparation for General Preventive. Medicine Core Section of ABPM Exam	4.00	3.83
Public Health	3.87	3.73
Practice-based Learning & Improvement	3.87	3.38
Patient Care	3.80	3.78
Systems-based Practice	3.47	3.16
Aerospace Medical Knowledge	2.67	3.13

APPENDIX E: GRADUATING TRAINEES INCLUDING THOSE WITH DIRECT SUPPORT THROUGH THE TRAINING GRANT (7/1/1998 THROUGH 6/30/2008)			
PHYSICIAN GRADUATES	**TRAINING PERIOD**	**DIRECT NIOSH SUPPORT**	**CURRENT POSITION**
Paula Lenny	2003-2004	D	Supervising Physician Occ. Health Services Kaiser Wailuku Clinic 80 Mahalani Street, Wailuku, HI 96793
Brian Morris	2003-2004	D	Associate Medical Director Health Resources, Inc. Woburn, MA 01801-6350
John Quigley (Internal)	2003-2004		Medical Director Newark Assembly Plant, Diamler Chrysler Corp Delaware 19713
Debra Rowse (Internal)	2003-2004		Hospital of the University of Pennsylvania Dept. of Occupational Medicine, GR Silverstein Philadelphia, Pa 19104
Gina Sheedy	2003-2004	D	Medical Director Willamette Falls Hospital Clackamas, OR 97015
Kevin Smith	2003-2004		Medical Director, Corporate Health Phoebe Putney Memorial Hospital Albany, GA 31705
Richard Baertlein	2004-2005	D	Assistant Regional Chief, Occupational Medicine Kaiser Permanente, Cascade Park Medical Office Vancouver, WA 98684-4098
Garson Caruso	2004-2005		Occupational Medicine Physician Bechtel Aberdeen Proving Grounds Gunpowder, MD 21010
Sulagna De	2004-2005	D	Medical Director, Occ Med Department Stroudsburg, PA 18360
Gary Ewing	2004-2005	D	Director, University of South Carolina Columbia, SC 29203
Paul Johnson	2004-2005		Chief Physician OHS/Kaiser Permanente Occupational Health Clinic San Francisco, California 94102
Scott Morris	2004-2005	D	Area Medical Director, Concentra Medical Centers Wheeling, IL 60090
Terrence D. Rempel	2004-2005	D	Occupational Medicine Physician Occupational Medicine Associates Spokane, WA 99202

Joan Baumbach	2005-2006	D	Occupational Medicine Physician New Mexico Department of Health Santa Fe, NM 87502-6110
Brian Bennett	2005-2006		Corporate Medical Director Sikorsky Aircraft Corporation Stratford, CT 06614
Daniel Keyes	2005-2006	D	Physician Advisor Concentra Occupational Health Carrollton, TX 75001-4624
Sabrina Rajendran	2005-2006		Medical Director First Health: Coventry Workers' Comp Services Downers Grove, IL 60515
Nancy Rodway	2005-2006	D	Clinical Professor Ohio State University Occupational Medicine Columbus Ohio 43205
MyLinn Sawyer	2005-2006	D	DaimlerChrysler Belvidere, IL 61008
Jerry Strohkorb	2005-2006	D	Deputy Health Director Chesapeake Health Department, OHS Chesapeake, VA 23320
Joel Yeasting	2005-2006		Occupational Care Consultants of Toledo, Inc. Oregon, OH 43616
Konstantin Berestnev	2006-2007	D	Occupational Medicine Physician Arkansas Occupational Health Clinic Lowell, AR 72745
Paul Eby	2006-2007	D	Partner Occupational Care Consultants Holland, OH 43528
Mary Ruth Hunt	2006-2007	D	Occupational Medicine Physician Moses Cone Occupational Health Greensboro, NC 27401
James Mazo	2006-2007	D	Medical Director St. Francis Hospital & Medical Center Hartford, CT 06105
Robert Reed	2006-2007	D	Section Chief Guthrie Clinic Corning, NY 14830
Sajjad Savul	2006-2007	D	Occupational Medicine Physician Virtua Health West Hampton, NJ 08060
John Seymour	2006-2007	D	Occupational Medicine Physician NW Permanente Physicians & Surgeons Portland, OR
Amy Espy-Smith	2006-2007		Occupational Medicine Physician Mercy Medical Center Baltimore, MD
Ramon Terrazas	2006-2007	D	Fire Surgeon Office of the Dept Phy SF Fire Dept. San Francisco, CA 94107

Dan Azar	2007-2008	D	Occupational Medicine Physician Alliance Occupational Medicine Milpitas, CA 95035
Syed Hussain	2007-2008		Occupational Medicine Physician St. Vincent's Medical Center Bridgeport, CT 06606
Allison Jones	2007-2008	D	Occupational Medicine Physician Carle Clinic Dept of OEM Urbana, IL 61801
Marc Leffer	2007-2008		Occupational Medicine Physician Concentra Medical Center Columbia, MD 21045
John Reichle	2007-2008	D	Occupational Medicine Physician Progressive Rehabilitation Associates Portland, OR 97225
Geraldine Ruffa	2007-2008	D	Occupational Medicine Physician Occupational Health Center Groton, CT 06340
Richard Sauerman	2007-2008	D	Occupational Medicine Physician Sandia National Laboratories Albuquerque, NM
David Turner	2007-2008	D	Medical Director Monsanto Company St. Louis, MO 63167
Wendy Brody	2008-2009	D	Occupational Medicine Physician The Permanente Medical Group Martinez, CA 94553
Melissa Broadman	2008-2009	D	Occupational Medicine Physician Chrysler Corporation, LLC Detroit, MI 48215
Jimmie Drummond	2008-2009	D	Occupational Medicine Physician The Pentagon Washington, DC
Gregory Garvin	2008-2009	D	Occupational Medicine Physician Concentra Medical Center Taylor, MI 48180
David Lukcso	2008-2009		Occupational Medicine Physician National Medical Advisory Services Rockville, MD 20850
Kurt Reintjes	2008-2009	D	Medical Director of OEM & Travel Medicine Kenosha and Racine Aurora Medical Centers Kenosha,WI, 53142
Jaishree Subramani	2008-2009	D	Occupational Medicine Physician Brookhaven National Laboratory Upton, NY 11973