EHAP

Vol. 1, No. 1 • May, 1993

**Environmental Hazards Assessment Program
at the Medical University of South Carolina**

**Results of the Environmental Health
Activities and Needs Assessment of the
South Carolina Statewide Family Practice
System for the Environmental Hazards
Assessment Program**

Catherine Musham, Ph.D.

Barry Hainer, M.D.

**RESULTS OF THE ENVIRONMENTAL HEALTH
ACTIVITIES AND NEEDS ASSESSMENT
OF THE SOUTH CAROLINA STATEWIDE FAMILY PRACTICE
SYSTEM FOR THE ENVIRONMENTAL
HAZARDS ASSESSMENT PROGRAM**

Catherine Musham, Ph.D.

Barry Hainer, M.D.

The Department of Family Medicine
The Medical University of South Carolina

The South Carolina Family Practice Research Consortium

Submitted to the
United States Department of Energy
By the
Medical University of South Carolina
May 1, 1993

The research for this needs assessment was supported in part from funds provided by the U.S. Department of Energy Grant DE-FG01-92 EW50625. Such support does not constitute an endorsement by DOE of the views expressed in this paper.

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

TABLE OF CONTENTS

BACKGROUND AND METHOD 1

SUMMARY OF THE COMMITTEE
INTERVIEWS 3

RECOMMENDATIONS 8

APPENDIX A: THE INTERVIEW SCHEDULE 10

APPENDIX B: INTERVIEW NOTES 11

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

BACKGROUND AND METHOD

An activities and needs assessment was conducted to determine what each of the seven family practice residency programs in South Carolina is providing in environmental health education. In addition, this study was designed to determine: (1) what Environmental Curriculum Steering Committee (the "Committee") members think are the barriers to greater emphasis on environmental health in family practice residency programs and, (2) what they think the basic environmental health educational goals for family practice residency programs should be.

Method

A semi-structured interview with members of the Committee during the period of December 1992 and January 1993. Participants in this study included (They are listed in the order in which they appear in the text.):

1. Dr. Barry Hainer, Professor of Family Medicine, at MUSC
2. H.E. Woodall, M.D., Professor of Family Medicine, Anderson Family Practice, Anderson, SC
3. Mark Godenick, M.D., Associate Director of Family Medicine, Spartanburg Family Medicine, Spartanburg, SC
4. Scott Grubbs, M.D., Assistant Director and Assistant Professor of Family Medicine USC School of Medicine in Greenville, SC
5. Ernest McCutcheon, M.D., MPH, Director, Division of Preventive Medicine, USC Richland Memorial Family Practice, Columbia, SC
6. David Garr, M.D., Associate Professor of Family Medicine, Department of Family Medicine, at MUSC
7. Stanley Schuman, M.D., Professor of Family Medicine, at MUSC
8. Sam Caldwell, Project Administrator of Family Medicine, at MUSC

Most of the interviews were conducted by telephone. Two (Dr. Garr and Dr. Hainer in Charleston) were face-to-face interviews. Catherine Musham, Ph.D., a social psychologist with extensive experience in interviewing and a faculty member of the Department of Family Medicine at the Medical University of South Carolina (MUSC), conducted each interview. The interview schedule consisted of the following five questions:

Question 1: What is currently being done in your residency program in environmental health education?

Catherine Musham, Ph.D. is a social psychologist and Assistant Professor of the Department of Family Medicine and the Department of Health Services Administration at MUSC. Barry Hainer, M.D. is Associate Professor of the Department of Family Medicine at MUSC.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Question 3: What do you think are the most important issues in environmental health?

Question 4: What do you think should be the family physician's role concerning environmental health?

Question 5: What do you think should be the basic goals of environmental health education in a family practice residency?

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

At the close of the interview the respondent was given an opportunity to make additional comments about the general subject of environmental health education.

The interview schedule was pilot-tested with Dr. Hainer (His interview is included in the data.) and reviewed by Dr. Glenn Fleming, Director of Professional and Public Outreach at MUSC's Environmental Hazards Assessment Program, prior to the data collection phase of this study.

Following the interviews of the Committee, Dr. Stan Schuman and Mr. Sam Caldwell of the Agromedicine Division of the Department of Family Medicine at MUSC were interviewed. A summary of this interview is included in Appendix B: Interview Notes.

SUMMARY OF THE COMMITTEE INTERVIEWS

Environmental Health Education Activities

Asked to describe what his residency program is currently doing in environmental health education, one member of the Committee replied, "not a huge amount". This intentional understatement is descriptive of each of the residency programs in our sample.

One of the "universals" in environmental health education among the seven residency programs is two to four noon conferences or seminars conducted annually. Some respondents mentioned that lead poisoning is a noon conference topic. Dr. Stan Schuman was mentioned as an agromedicine lecturer.

Most of the residency programs offer at least one industrial site visit, typically on an elective basis.

None of the residency programs offer formal didactic presentations or systematic evaluation in environmental health. With the exception of Richland Memorial in Columbia, which Dr. Woodall says provides an elective through occupational medicine, none offers an elective in environmental health.

Summary. Each of the family practice residency programs conducts a small number of noon conferences on selected environmental health topics. Most offer some site visits, and one offers an elective on environmental health through occupational medicine. There is no formal didactic presentation or resident evaluation in environmental health.

Barriers to Greater Emphasis on Environmental Health

"Not enough time" was among the first barriers mentioned by each of the Committee members. All respondents signaled that environmental health is difficult to fit into a curriculum already crowded with a variety of sub-topics. As one respondent signaled, there is so much content already in the curriculum that in order to incorporate environmental health, something else has to be "sacrificed". Another aspect of the barrier imposed by time limitations, is the demands associated with patient care. According to one respondent, patient care responsibilities can over-ride the educational program.

Almost all of the Committee members said that lack of environmental health awareness and knowledge among the faculty was another barrier to greater emphasis on this topic. It is evident that most Committee members do not perceive themselves as very knowledgeable in this area.

It was also clear from the responses to this question that environmental health is perceived as one of many subtopics in the family practice residency curriculum. In the competition for time against primary topics and other sub-topics in residency training, environmental health is burdened by two distinct disadvantages. First, this topic suffers from what one of the physicians interviewed called a "limited knowledge base". Second, environmental health is viewed by some as having little importance in the overall family medicine curriculum, a perception that is most likely related to lack of knowledge.

Summary. The primary barriers to greater emphasis on environmental health education in South Carolina family practice residencies are lack of time and lack of faculty awareness and knowledge.

Most Important Environmental Health Issues

The question, "What do you think are the most important issues in environmental health?" elicited a wide range of responses, ranging from the very general to a list of specific topics. There was consensus that understanding of the toxicology of various exposures is a high priority. Most respondents mentioned industrial exposure, and pollution in the air, soil, and water supply. These were characterized as "traditional" or "common" environmental health concerns.

Some of the physicians interviewed identified "environmental and occupational histories" (i.e., the ability to take such histories) as an important issue.

Some respondents raised the question of the physicians role in environmental health issues in the community. One mentioned, for example, "the physicians ability and commitment to live in environmentally sound ways". Another signaled the importance of examining environmental health issues in the context of the community. Three respondents listed a variety of issues.

One respondent's list included:

- Food safety and pesticides in food
- Possible exposure to radiation in communities located near nuclear plants
- Radon exposure in upstate South Carolina
- Lead exposure in children

A second respondent's list included:

- Food handling
- Nuclear accidents
- Exposure to nickel and other chemicals at industrial work sites
- Hearing loss at industrial sites

A third respondent's list included:

- Lead and mercury poisoning
- Ethylene oxide
- Phosphate pesticides
- Radon and asbestos

Another respondent divided his list into state issues and national issues:

A. State

- Lead exposure
- Industrial-related pollution
- Savannah River site

B. National

- Agromedicine
- Use of pesticides
- Presence of chemicals in widely used consumer products
- Degradation of the ozone layer

Summary. According to the majority of respondents, the most important environmental health issues are the “traditional” ones such as air, water, and soil pollution. The physician’s role in community environmental health concerns was also raised as an important issue.

The Family Physician’s Role in Environmental Health

Respondents generally commented on the clinical aspects of the physician’s role. It was agreed that family physicians should be able to identify illnesses which are caused by environmental exposure. Most mentioned that the family physician should either have the ability to treat the environmental-related illnesses or have the knowledge to refer the patient to an appropriate specialist.

One respondent summarized the three components of the family physician’s role in environmental health as:

- Prevention counseling (e.g., giving patients advice about environmental risks such as the presence of radon in homes with basements).
- Diagnosis (i.e., being able to recognize an environmentally related health problem when presented).
- Understanding and using a referral process when confronted with environmental health problems beyond the family physician’s expertise.

(This respondent was the only Committee member who included preventive activities in the family physician’s role.)

The majority of respondents went on to discuss the community or “political” aspects of the physicians role, suggesting that the family physician take a proactive position with regard to environmental health in the community. For example, one respondent said that, “family doctors should take a proactive role in their communities in understanding and interacting with the various key players in environmental issues”. Another respondent believes that while family physicians should be alert to diseases caused by environmental factors, they should also “look beyond the biological to community concerns and problems”.

This physician added that it is legitimate for the family physician to take a proactive role in community environmental health matters, “assuming he/she has the time and energy”. Another respondent characterized the family physician’s role as “proactive” and further defined this to include “serving as an intermediary between community and industry agents”... “being involved in environmental health education of the public”..., and “encouraging recycling in the community...”.

Summary. Perceptions of the family physician’s role in environmental health education include clinical as well as community and advocacy components. With respect to the latter, many respondents characterized the family physician’s role as “proactive”.

The Basic Goals of Environmental Health Education

When asked about the basic goals of environmental health education in a family practice residency program, many respondents reiterated the aspects of the family physician’s role in environmental health. For example, one of the Committee members said that family medicine residents should be taught to identify, treat, and refer environmentally caused

illnesses. Another respondent's answer stressed the three components he identified as critical to the family physician's role: prevention counseling, diagnosis, and referral knowledge. Some respondents added that residents should be trained in environmental case histories.

Another category of response suggested a more fundamental, broader program which would enable residents to determine if and how they wanted to pursue this topic in greater depth. For example, one respondent commented that the basic goals of environmental health education in a family medicine residency should be to provide residents with fundamental information and to help them decide what role they want to play in individual and community environmental health. According to another respondent, residents should have enough exposure to environmental health to be able to determine if they wish to specialize in this area.

A third category of response focused on the family physician as a proactive agent for environmental health in the community. For example, one Committee member believes that in addition to training the resident in the basic clinical aspects of environmental health, the family practice curriculum should instill an awareness of the environmental problems in the community as well as an understanding of how to play a role in negotiations among the various civic groups. He added that family practice residents should be equipped with the knowledge required to live an "environmentally sound life style". Along the same lines, another respondent mentioned that family physicians should have the skills to help the community recognize and solve local environmental problems.

Summary. Three categories of goals were identified including 1) clinical skills (i.e., diagnosis, treatment, and referrals for environmental-related illnesses), 2) instilling enough basic knowledge in environmental health to enable residents to determine if they want to pursue this topic as a specialty and the role they want to play in environmental health, and 3) equipping residents with the necessary knowledge to take on a proactive role in community environmental health issues.

Perception of an Ideal Environmental Health Curriculum

In the final question of the interview, physicians were asked to comment on what they would ideally like to see happen in environmental health education at their residency program. There were a variety of responses to this question. One respondent said simply that he would like to see environmental health given a higher priority in his residency program. Another was more specific, calling for a greater number of didactic presentations and site visits and the addition of large scale exposure training. A third respondent agreed that there should be a greater number of industrial site visits and suggested also the establishment of a community health rotation which would include environmental health topics, an environmental health resource book, a self-tutoring package, and a faculty education program. In a fourth respondent's answer, two of these strategies were underscored: faculty education and a packaged tutoring program (specifically, a "computerized module" on environmental health). A fifth respondent also mentioned faculty training ("overcoming the general lack of awareness and knowledge of environmental health issues among the faculty"), establishment of an environmental health rotation and elective, and in response to a previous question, the need for a packaged educational program. Another respondent noted the relevant importance of a packaged teaching program. He signaled importance of planning strategies in curriculum

development such as determining what and how environmental health topics should be taught and what resources are needed to make this curriculum informative and rewarding for residents.

Summary. The most frequently mentioned components of an ideal environmental health curriculum in a family practice residency include packaged educational materials, a greater number of industrial and agricultural site visits, and faculty education.

RECOMMENDATIONS

- 1. Provide faculty members with a definition of "environmental health" which includes an understanding of what is (and is not) included in this category, environmental-related illnesses, and the environmental risks themselves.**

There appears to be no clear-cut definition of "environmental health", in the minds of the physicians we interviewed. Many respondents discussed occupational health and environmental health. Some wondered openly if there is a difference between the two areas and if so, what this difference is. Although there were many references to "environmental-related" illnesses, these were not specified. Environmental risks were also vaguely alluded to, with no clear definition of specific environmental risks.

- 2. Faculty need to be sold on the idea on an environmental health curriculum.**

One of the essential steps in implementing an environmental health curriculum is to promote this curriculum to the faculty, most importantly, to members of the Committee. There is considerable variation in levels of enthusiasm about environmental health education and general knowledge about environmental health even among members of the Committee (i.e., among faculty members identified as particularly interested and knowledgeable about environmental health). It can be assumed that awareness of environmental health issues and commitment to an environmental health curriculum is weaker among faculty members who are not Committee members. Successful implementations of an environmental health curriculum requires the support of all faculty members—and especially, the support of the committee members. A prerequisite to creating a favorable attitude toward environmental health education is heightened awareness and knowledge of this topic among faculty.

- 3. The environmental health curriculum must be neither time-consuming nor cumbersome.**

A "packaged" teaching program, if available, is highly recommended.

There was a consensus among members of the Committee that the primary barrier to greater emphasis on environmental health in their residency programs is lack of time. The addition of a formal environmental health component in the family practice residency curriculum should be neither time-demanding or difficult to administer. Since there is relatively little expertise among the present faculty, the ideal approach would be one which uses a self-tutoring strategy.

- 4. The environmental health curriculum should stress the following clinical skills:**

- How and when to do an environmental history.
- Diagnosis of environmental-related illnesses, both chronic and acute.
- How to treat the environmental-related illnesses which are within the family physicians area of expertise.
- Appropriate referral sources for environmental-related illnesses which are not within the family practice expertise.

5. Some of the information provided in the educational program should be community-specific.

Many of the Steering Committee members believe that there should be an emphasis on local and community environmental health issues. On a practical level, physicians need to learn about the environmental risks most likely to be encountered by residents of the community they serve. For this reason, an environmental health education program should include some emphasis on local environmental health issues.

6. If not in the packaged teaching program, there should be some additional training for faculty and residents in how to take a proactive role in community, environmental health issues.

Many of the physicians we interviewed believe that it is important that family physicians take a "proactive" role in community, environmental health issues. While the interviews contain many references to proactive behavior, it is not clear that the family doctors we interviewed know what this endeavor actually entails. One means of generating support and enthusiasm for an environmental health education package is to include information that would enable them to act in a proactive manner in their communities.

APPENDIX A: THE INTERVIEW SCHEDULE

Question 1: What is currently being done in your residency program in environmental health education?

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Question 3: What do you think are the most important issues in environmental health?

Question 4: What do you think should be the family physician's role concerning environmental health?

Question 5: What do you think should be the basic goals of environmental health education in a family practice residency?

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

APPENDIX B: INTERVIEW NOTES

Interview Conducted With: Barry Hainer, M.D.

Date: November 28, 1992

Question 1: What is currently being done in your residency program in environmental health education?

Dr. Hainer mentioned several environmental health education components in the residency program including:

- Presentations by Dr. Stan Schuman, Professor of Family Medicine at MUSC, on agricultural environmental health topics
- Site visits to farming communities
- Industrial site visits (e.g., Westvaco, Amoco, and the shipyards)
- Noon conferences on various environmental health topics

The site visits are a required part of the curriculum. Dr. Hainer said that they are analogous to "home visits". The primary purpose is to teach "process" as opposed to "facts". Emphasis is placed on equipping residents with information on resources for help with workplace-related health problems. Evaluation is informal.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. Hainer mentioned the following barriers:

- Lack of perceived need
- Lack of environmental health expertise among faculty
- Competition in an already "crowded curriculum" with topics perceived to be of greater importance.

Dr. Hainer suggested a need for a self-taught educational package for residents which would have prepared lectures and evaluational materials. He said that he has used this type of educational tool in teaching residents about AIDS and is favorably impressed with it. He does not know of a similar package of environmental health training; however, he recommends that MUSC examine this prospect.

Question 3: What do you think are the most important issues in environmental health?

Dr. Hainer mentioned the following issues:

- The most prevalent environmental health related problems (e.g., air quality and indoor and outdoor pollution)
- Food safety and pesticides in food (He added that public concern about food safety is much overblown.)
- Environmental carcinogens

- Communities located near nuclear plants which could account for possible exposure to radiation
- Naturally occurring radon exposure in upstate South Carolina
- Lead exposure in children

Question 4: What do you think should be the family physician's role concerning environmental health?

According to Dr. Hainer, the family physician's role in environmental health involves three components:

- Prevention counseling (e.g., advising people about environmental risks such as presence of radon in homes with basements).
- Diagnosis—the ability to recognize an environmentally related health problem when presented
- Understanding and using a referral process when confronted with environmental health problems beyond the family physician's expertise.

Question 5: What do you think should be the basic goals of environmental health education in a family practice residency?

Dr. Hainer said that the three components identified above (prevention counseling, diagnosis, and referral know-how) should be the basic goals of environmental health training in family practice residencies.

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

Dr. Hainer believes that the following is needed to accomplish basic goals in environmental health education:

- Dedication of curriculum time (2 to 10 hours)
- Attractive environmental health elective option for interested residents
- Attractive rotation for residents who want to become more involved in environmental health
- Means of overcoming the general lack of awareness and knowledge of environmental health issues among faculty

Other comments:

Dr. Hainer pondered the exact definition of "environmental health". He asked about the meaning of the term, "occupational health" as opposed to "environmental health".

Interview Conducted With: Dr. H.E. Woodall

Date: December 9, 1992

Question 1: What is currently being done in your residency program in environmental health education?

Dr. Woodall said that his residency program has created a month of education devoted to environmental medicine community and occupational medicine. The environmental medicine component includes site visits to Environmental and Quality Control which he later said residents consider to be one of the highlights of this month.

Dr. Woodall added that environmental education amounts to 3 1/2 days of reading three or four lectures.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. Woodall mentioned that the obvious barrier is that "you can't teach everything". He also mentioned that there is a "limited knowledge" base among the faculty. There are limited resources available to teach environmental medicine.

Question 3: What do you think are the most important issues in environmental health? Dr. Woodall first mentioned what he described as "the common ones":

- Exposure to toxins in the air and water
- Lead and mercury poisoning
- Ethylene oxide
- Phosphate pesticides
- Radon and asbestos
- Emergency and chronic conditions related to environmental exposure

Question 4: What do you think should be the family physician's role concerning environmental health?

First, Dr. Woodall believes that family physicians should be advocates for clean air and clean water. They should be able to think that there might be an environmental cause of an illness, if not actually be able to make a specific diagnosis. They should be familiar with common predictable emergencies (e.g., not nuclear accidents but migrant worker exposure to spray). Dr. Woodall added that he is glad MUSC is conducting this needs assessment on a statewide-basis. He would like to have an interactive educational program which teaches residents the basics of environmental health.

Question 5: What do you think of the basic goals of environmental health education in a family practice residency?

Dr. Woodall said that the goal of environmental health education should be to expose residents to enough so that they know what to do if they want to pursue this area specialization. Residents should know what the top ten environmental exposures/problems are. They should also have the ability to use references for environmental problems.

Question 6: What would you ideally like to see happen in environmental health education in your residency program?

Dr. Woodall would like to have a computerized module on environmental medicine (an interactive educational program). He believes that a faculty member at each residency program should receive further education in environmental medicine as well as the educational materials to teach this subject. He added that he would be responsible for his program.

Interview Conducted With: Dr. Mark Godenick

Date: December 2, 1993

Question 1: What is currently being done in your residency program in environmental health education?

Dr. Godenick noted that there are three or four environmental medicine noon conferences on such topics as lead poisoning and injury prevention each year. Residents train in lead poisoning diagnosis. There is some perceiving although Dr. Godenick signaled that they are probably missing some diagnoses due to a lack of knowledge. He acknowledged that at one time, a team from the clinic conducted an industrial site visit at Michelin Corporation in Spartanburg, but has not done so since.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. Godenick identified the following barriers:

- Lack of knowledge among residents and faculty
- Family medicine has many subtopics, and it is difficult to incorporate family medicine.
- Demands of patient care over-ride education.

Question 3: What do you think are the most important issues in environmental health?

Dr. Godenick mentioned the following as important:

- Some knowledge of water contaminants
- Food handling and waste
- Indoor and outdoor pollutants
- Nuclear accidents (Physicians should know how to respond.)
- Heavy metals (exposure to nickel and other chemicals at industrial worksites)
- Toxic waste
- Risk assessment
- Environmental and occupational histories
- Hearing loss at industrial sites
- Physician's ability and commitment to live in environmentally sound ways

Question 4: What do you think should be the family physician's role concerning environmental health?

Dr. Godenick believes that the family physician (especially those working in smaller communities) should take a proactive role regarding environmental health issues in the community.

In addition, the family physician:

- Should encourage recycling
- Should have the knowledge and skill to evaluate worksites

- Should act as an intermediary between community and industry agents
- Should be involved in environmental health education to the public
- Has an obligation to provide role models for a lifestyle that is in harmony with the environment and should serve as a role model for communities, neighborhoods, and patients.

The family should be able to treat such common, environmentally related disorders as:

- Lead poisoning
- Methyl mercury in water
- Set curriculum of common disorders

The family physician should know how to refer environmentally related disorders which he/she cannot treat.

Question 5: What do you think should be the basic goals of environmental health education in a family practice residency?

According to Dr. Godenick,

- The family physician should know the common environmental hazards and how to treat or refer to more common environmentally related disorders.
- The family physicians should be aware of environmental problems in the community and play a role in negotiations among various groups in environmental issues and disputes.
- Have the knowledge to maintain an environmentally sound lifestyle.

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

Dr. Godenick would like to see the following:

- A community health rotation which would include environmental medicine topics
- Regularly scheduled noon conferences on environmental health issues.
- An environmental health resource book with state-of-the-art discussion of environmental health issues
- A greater number of industrial site visits
- Training of residents in how to do an environmental history
- Faculty education in environmental health

Other comments:

Dr. Godenick commented that environmental health is a “close to the heart” issue. He would like to have more time to spend on it.

He added that environmental health education could be modeled on what has been previously done in preventive medicine. Dr. Godenick has conducted a survey of residents examining their viewpoints regarding occupational medicine.

Interview conducted with: Dr. Scott Grubbs
December 2, 1992

Question 1: What is currently being done in your residency program in environmental health education?

Dr. Grubbs said that at the time, “not a huge amount” is being done in environmental health education. However, he did mention that more was carried out in 1992 than in 1991.

For example, first- year residents receive approximately three hours of instruction in environmental medicine issues and learn how to create an environmental history. In addition, two or three noon conferences focus on environmental medicine annually. These include such timely subjects as lead poisoning and domestic and environmental hazards. There are no formal didactic presentations in environmental health. Dr. Grubbs described an occupational elective in which residents talk to local industrial hygienists and visit industrial sites and the Health Department.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

According to Dr. Grubbs, there is so much content already in the curriculum that something has to be sacrificed for environmental health education. In addition, he mentioned that there are relatively few acute effects associated with the environment. Dr. Grubbs noted the lack of awareness among faculty and residents, emphasizing that environmental health issues are not well-publicized to either group.

Question 3: What do you think are the most important issues in environmental health?

According to Dr. Grubbs, the most important issues include the “traditional” concerns with industrial exposure, air, water, soil pollution, and radiation. He suggested that such issues should be examined in the context of the specific community.

Question 4: What do you think should be the family physician’s role concerning environmental health?

Dr. Grubbs emphasized the dichotomous nature of the family physician’s role with respect to environmental health, saying that it involves two levels—the individual and the community.

With respect to the former, the family physician should help to identify and to treat individual environmental exposures. The family physician’s community role involves being proactive on local issues, which Dr. Grubbs sees as legitimate assuming that the physician has the time and energy. Dr. Grubbs said that while the family physician should be alert to disease caused by environmental factors, he/she should look beyond the biological to the community concerns and problems.

Question 5: What do you think should be the basic goals of environmental health education in family practice residency?

Dr. Grubbs mentioned that the goals should include enabling residents to have a general understanding of the so-called big picture issues in environmental health.

Residents should know what "components of air/water pollution to be aware of" and how to do an environmental case history. Also, residents should be exposed to case studies.

Question 6: What would you ideally like to see happen in environmental health education at your residency programs?

Dr. Grubbs said he would like to see the following at his residency program:

- Required didactic presentations on the major environmental health issues
- Site visits with experts in environmental health
- An educational approach which takes environmental and occupational medicine down to the level of individual exposure
- Some "how-to" training in the event of a large-scale exposure.

Dr. Grubbs added that environmental health precepting is difficult because it does not make sense to ask, "Did you ask about exposure?" for every patient. A set of clinical circumstances should determine whether or not the doctor asks about possible exposure.

Interview conducted with: Dr. Ernest McCutcheon

Date: December 16, 1992

Question 1: What is currently being done in your residency program in environmental health education?

Dr. McCutcheon listed the following:

- Three or four noon conferences/seminars annually which focus on environmental health issues
- An elective rotation through Occupational Medicine
- Visits to industrial sites offered to residents on an elective basis

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. McCutcheon said that the primary barrier is the fact that environmental medicine does not receive good support. He said it is not regarded as the important topic it is. It is also very difficult to "squeeze" environmental medicine in with the rest of the topics in the residency curriculum.

Question 3: What do you think are the most important issues in environmental health?

Dr. McCutcheon said that the toxicology of various exposures is an important issue in environmental health. He also believes that family practice residents should understand the environmental problems of the community and the attitudes of people living in the community toward those problems.

At this point, Dr. McCutcheon mentioned the Duke University environmental hazards training program and suggested that this program might be helpful in identifying issues in environmental health.

Question 4: What do you think should be the family physician's role concerning environmental health?

According to Dr. McCutcheon, the family physician should be able to identify and treat illnesses which are related to environmental exposure. In the event the family physician cannot address the environmental issues, he/she should be able to refer the patient to the appropriate specialists. He also believes that family doctors should take a proactive role in their communities in understanding and interacting with the various key players in environmental issues.

Question 5: What do you think should be the basic goals of environmental health education in a family practice residency?

Dr. McCutcheon believes that family medicine residents should be taught how to identify, treat, and refer environmentally caused illnesses. The family physician should also have the skills to help the community recognize and solve environmental problems in its environs.

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

Dr. McCutcheon would like to see environmental medicine given a higher priority in the residency program.

Interview conducted with: Dr. David Garr

Date: December 17, 1992

Question 1: What is currently being done in your residency program in environmental health education?

(See Dr. Hainer's interview.)

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. Garr noted two primary barriers:

- No instructors to teach environmental health
- No time to teach environmental health

He also mentioned that a "user friendly" teaching package would help overcome these barriers. He also suggested that a consultant who specializes in environmental health education might be useful in developing such a package.

Question 3: What do you think are the most important issues in environmental health?

According to Dr. Garr, there are two dimensions to environmental health: the state level and the national level.

A. On the state level, the most important issues are:

- Lead exposure in children
- Industrial-related pollution (e.g., the Savannah River Site)

B. On the national level:

- Agromedicine
- Use of pesticides
- Use and exposure to chemically-prepared things such as food and clothing
- Destruction of the ozone layer and skin cancer

Question: 4 What do you think should be the family physician's role concerning environmental health?

Dr. Garr said that the family physician's primary role is to be able to recognize environmentally caused problems and how to receive help if unable to treat (the problem by) him/herself. The role of the family medicine educator in environmental health is to be familiar with the issues on both the community and state level and to know which ones to highlight.

Question 5: What do you think should be the basic goals of environmental health education in family practice residency?

According to Dr. Garr, the residency program should provide basic information about environmental health in order to help residents understand what role they should play on a state and a national level.

Question 6: What would ideally like to see happen in environmental health education at your residency program?

Dr. Garr believes that MUSC has to first identify what should be taught and how to teach it. Again, he mentioned the packaged teaching program and access to MUSC's resources make introducing this curriculum rewarding and informative for residents.

Interview conducted with: Dr. Stan Schuman and Mr. Sam Caldwell

Date: January 20, 1993

Question 1: What is currently being done in your residency program in environmental health education?

Dr. Schuman and Mr. Caldwell signaled that the term "environmental medicine" has become adopted by physicians who claim one belongs to a medical specialty which focuses on environmental risks in the environment. They admit that the term "environmental health" is not ideal in that it has become a buzzword in grant jargon. On the other hand, it is far better to use this term than to be confused with the controversial "environmental medicine" group. Some of the physicians in our sample used these terms synonymously, indicating a lack of awareness of the connotations of the "environmental medicine" term.

In response to the question of what is being done regarding environmental health education in the seven family practices residencies, Dr. Schuman mentioned the lectures his colleagues and he had given. The topics of these lectures included:

- Occupational medicine
- Equipment safety
- Food safety
- Animal-transmitted infections
- Pesticides
- Snake bites
- Chemical safety
- Skin cancer
- Heat stress management

In addition, Dr. Schuman mentioned efforts in promoting his division as a referral service for South Carolina family physicians.

Question 2: What do you think are the barriers to placing a greater emphasis on environmental health in your residency program?

Dr. Schuman and Mr. Caldwell are aware of the crowded family practice residency curriculum and the competition for time with other educational topics. They also pointed out that many family physicians do not perceive a need for environmental health knowledge and often fail to see the application of this information to patient care.

Question 3: What do you think are the most important issues in health?

Dr. Schuman mentioned the following topics:

- Radioactive waste and disposal
- Water quality
- Pesticides
- Involuntary exposure to toxins

- Chemical trespassing/leakage
- Noise-induced hearing loss
- Cancer, birth defects, infertility, and certain neurological disorders (phenomena that the public and media commonly attempt to blame on environmental factors)

Question 4: What do you think should be the family physicians' role concerning environmental health?

Certain special interest groups have misled the public on issues related to pesticides and radioactive wastes. The result: a form of hysteria and overblown concern about health risks. They believe that family physicians are the most appropriate source for providing the public (and individual patients) with accurate information about these health risks.

Question 5: What do you think should be the basic goals of environmental health education in a family practices residency?

According to Dr. Schuman and Mr. Caldwell, family physicians are likely to be looked upon as community leaders in environmental health. In that role, family physicians should be able to provide specific responses. This applies to both family physicians engaged in rural practices and those working in urban settings.

Regarding environmental health, the family practice residents should be trained in:

- Differential diagnosis
- Treatment and prevention of environmentally caused diseases

Physicians should also be trained to respond (on the psycho-social level) to patients who have (or think they have) an environmentally caused disease.

Question 6: What would you ideally like to see happen in environmental health education at your residency program?

Dr. Schuman and Mr. Caldwell are working on an environmental health education program which they will be proposing to Dr. Cleve Hutson, Chairman of the Department of Family Medicine at MUSC. They have developed a series of self-tutoring monographs on agromedicine based on quantitative study of the type of information family physicians needed in this area. They would like to apply the same strategy in developing a series of monographs on environmental health issues.

In addition to developing a monograph series, Dr. Schuman believes that there should be additional strategies for training medical students (and residents) and that environmental health care should be offered.

Dr. Schuman and Mr. Caldwell believe that it is important that the education and consultation efforts derive from the same source. In other words, the same group that serves in a consulting capacity for family physicians on environmental health issues should be responsible for providing environmental health education.

**DATE
FILMED**

2 / 10 / 94

END