

Reproductive Environmental Health Education for OB/GYN Specialists

Marva G. Zlatnik, MD. MMS1, Patrice Sutton, MPH1, Tracey Woodruff, PhD. MPH1, Mark Miller, MD. MPH2

¹Department of Obstetrics, Gynecology & Reproductive Sciences, University of California, San Francisco;

² UCSF Pediatric Environmental Health Specialty Unit, Department of Pediatrics, University of California, San Francisco



BACKGROUND

- Research demonstrates robust associations between exposure to environmental toxicants & reproductive health
- Training in environmental health is largely absent from medical school curriculum & Ob/Gyn residency & fellowship trainings
- To address this unmet need we designed an elective rotation in Reproductive Environmental Health & Justice (REHJ), in conjunction with the UCSF PEHSU

OBJECTIVES

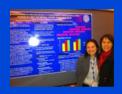
- 1. Provide OB/GYN Residents/Fellows with experience in all aspects of REHJ including:
- Scientific analysis & medical knowledge
- Effective, culturally-appropriate communication to the general public, the media, & the health care professionals
- 2. Develop competencies and performance indicators for REHJ

METHODS

- Modeled on the current UCSF PEHSU rotation
- Incorporates previously established competencies & objectives in EH from the Ambulatory Pediatric Association, the American College of Occupational & Environmental Health, & the Institute of Medicine.
- Adheres to EPA's Guidelines for the Preparation & Professional Development of Environmental Educators

RESULTS

An elective rotation: A month-long block in the context of a 3-year fellowship in MFM or a 4-year residency in Ob/Gyn







1. Curriculum:

1. Didactic training

- REHJ science (i.e., precautionary principle, timing of exposures, developmental susceptibilities, mechanisms of metabolism, exposure half-lives, trans-placental passage, etc.)
- Clinical manifestations of reproductive toxicants, i.e., lead, mercury, & endocrine disrupters

2. Clinical rotation

 Residents & fellows will attend clinics in the Region 9 PEHSU to gain hands-on experience in the diagnosis, management, & education of patients with EH exposures

3. A project to disseminate REHJ knowledge, For example:

Create a training program for prenatal care providers in the local county clinics

 Use local data to identify areas of the community with the highest risks to target community outreach

RESULTS, cont.

II. Competencies for MFM fellows:

ACADEMIC PERSPECTIVE

- 1) Write grant application (G)
- 2) Submit study (G)
- 3) Analyze available data (EH)
- 4) Collect primary data, analyze the results, & summarize the findings (G)
- 5) Publish a peer-reviewed article or present at a professional meeting (G)
- 6) Appreciate the policy implications & formulate recommendations based on clinical & epidemiologic research findings (G)
- 7) Develop curricula to teach the fundamentals of REHJ (EH)
- 8) Understand the impact of the environment on fetal development & translate that understanding into practice, teaching, & research (G)

INDIVIDUAL PATIENT CARE PERSPECTIVE

- 1) Take an environmental history (EH)
- 2) Evaluate conditions linked to the environment & understand prenatal exposures that may lead to disorders in later in life (EH)
- 3) Utilize a specialized EH laboratory & interpret results (EH)
- 4) Report health conditions to the state or local DPH (G)
- 5) Develop a plan to reduce a patient's exposure to environmental contaminant(s) (EH)
- 6) Evaluate the effectiveness of therapies & methods of reducing environmental exposures (EH)
- 7) Coordinate community resources to improve a patient's well-being (G)
- 8) Respond to questions about acute exposures from patients & health care providers who call a Poison Control Center (EH)
- Write a case report about an individual patient & critically review the literature on that patient's environmental health problem (EH)

RESULTS, cont.

COMMUNITY ADVOCACY PERSPECTIVE

- 1) Assess a health problem in a community (G)
- 2) Assess an environmental exposure in a community (EH)
- Communicate environmental risks to community members, school board, political groups, & other stakeholders (EH)
- 4) Develop & implement community-based intervention (G)
- 5) Evaluate effectiveness of a community intervention (G)
- 6) Work as a member of a multidisciplinary team (G)
- 7) Develop media literacy as an advocacy tool in promoting environmental health (EH)
- 8) Interpret legal & regulatory authority as well as nonregulatory approaches as they relate to reproductive health & the environment (EH)
- 9) Prepare & present testimony before local, state, & national legislators (EH)

CONCLUSIONS

Implementation of the proposed REHJ elective for OBGYN residents & MFM fellows will promote knowledge transfer from the PEHSU to the OB/GYN community & ultimately support improved child health outcomes by extending environmental health competency to reproductive health professionals.

REFERENCES

Available at: http://prhe.ucsf.edu/publications

FUNDING

Dr. Zlatnik, Ms Sutton & Dr. Woodruff: UCSF PEEC, PRHE: USEPA grant # 83543301 & NIEHS grant # 1P01ES022841-01 Dr Miller: NIH NIEHS/EPA award numbers 1P01ES018172-01 (NIEHS) / RD83451101 (USEPA)