

# Health Care & Pesticides

IMPROVING EDUCATION AND PRACTICE



N·E·E·T·F  
The National Environmental Education & Training Foundation



U.S. Department of Labor



National Strategies for Health Care Providers: Pesticides Initiative

# Why Pesticides and Health Care Providers?

**P**esticides have become ubiquitous in our society, affecting virtually all populations across America. Individuals living in rural, urban and suburban areas can be exposed in the home, workplace, school or community. Several driving forces have brought environmental health concerns, and specifically, pesticides issues, to the forefront of primary health care.

- ▶ The US Environmental Protection Agency's Worker Protection Standard, implemented in 1995, was designed to inform millions of agricultural workers about pesticides hazards and to reduce pesticide exposure. The first few years of experience under this mandate highlighted the need for primary care providers to also expand their knowledge and skills in recognizing, diagnosing, and managing health effects from agricultural pesticide exposures.
- ▶ Americans look to their primary care providers for guidance on health concerns, including the effects of environmental and occupational hazards, such as pesticides.
- ▶ The American Medical Association adopted a resolution urging the US Congress, government agencies, and private organizations to support improved strategies for the assessment and prevention of pesticide risks.<sup>1</sup>
- ▶ Two Institute of Medicine committees, focusing on nurses and physicians respectively, recommended an integration of environmental health issues throughout the various stages of training and clinical practice for health care providers.<sup>2,3</sup>

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<sup>1</sup> American Medical Association. Report 4 of the council on scientific affairs, educational and informational strategies for reducing pesticide risks (resolutions 403 and 404). 1994.

<sup>2</sup> Pope AM, Rall DP, eds. *Environmental Medicine: Integrating a Missing Element into Medical Education, Institute of Medicine Report*. Washington, DC: National Academy Press; 1995.

<sup>3</sup> Pope AM, Snyder MA, Mood LH, eds. *Nursing, Health, & the Environment, Institute of Medicine Report*. Washington, DC: National Academy Press; 1995.

- ▶ Additionally, an IOM committee on environmental justice in 1999 recommended enhancing health professionals' knowledge of environmental health as well as environmental justice issues.<sup>4</sup>

Despite these driving forces, most health professionals still do not have adequate knowledge and tools to address patients' environmental health issues, as well as communities' environmental health concerns.

The current lack of adequate environmental education for health care providers sounds an alarm for leaders in the health care community, whose professionals are not prepared to deal with pesticide-related illnesses as they are presented. A 1994 survey of environmental medicine content in US medical schools found that:

*75 percent of medical schools require only about seven hours of study in environmental medicine over four years.*<sup>5</sup>

Furthermore, once in practice, health care providers' awareness and understanding of pesticides-related illness may or may not ever expand. Patients may suffer acute health effects from pesticides exposure and have concerns about the risks of cancer, birth defects, reproductive effects, and other conditions from exposure to low levels of pesticides. A health care community that is more aware of specific concerns will be better prepared to effectively diagnose, treat, and prevent pesticide-related health conditions.

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<sup>4</sup> Institute of Medicine. *Toward Environmental Justice, Research, Education, and Health Policy Needs*. Washington, DC: National Academy Press; 1999.

<sup>5</sup> Schenk M, Popp SM, Neale AV, et al. Environmental medicine content in medical school curricula. *Acad Med*. 1996;71(5):27-29.

# A Comprehensive Method for Change

**N**ational Strategies for Health Care Providers: Pesticides Initiative, has been developed by a group of national experts representing a wide range of stakeholders. Together, these leaders have constructed a 10-year Implementation Plan that will ensure that pesticides issues become integral elements of the education and practice of primary care health providers.

## Target Audience

### Primary Health Care Providers

- ▶ Physicians
- ▶ Nurses
- ▶ Nurse Practitioners
- ▶ Physician Assistants
- ▶ Nurse Midwives
- ▶ Community Workers

### Decision-making Bodies

- ▶ Curriculum Committees
- ▶ Accrediting Institutions
- ▶ Administrators
- ▶ Residency Review Committees
- ▶ Institutions Governing Health Care & Health Practice/Requirements

The Implementation Plan presents a three-pronged approach with specific activities in education, practice and resources/tools, through which all target audiences will receive increased education and practice skills. All recommendations are specific and are tied to measurable outcomes.

*The National Strategies for Health Care Providers: Pesticides Initiative* is an initiative of The National Environmental Education & Training Foundation (NEETF) in partnership with the US Environmental Protection Agency, and in collaboration with the US Department of Health and Human Services, the US Department of Agriculture, and the US Department of Labor.

Experts in environmental health, pesticides, nursing and medical education, primary care, epidemiology, children's health, minority health, and agriculture carefully formulated the Implementation Plan, based on their comprehensive experiences and published data. The Plan involves a coordinated effort across their professional fields to effect long-term change in health care provider education and, ultimately, the national health care system.

*“Teachers don’t teach what they don’t know...  
If you make it relevant to them, they’ll find a  
way to teach their students.”*

— Marcia Owens, JD, Minority Health Professions Foundation



# Improving Environmental Health through Pesticides Education

## Vision

The goal of the *National Strategies for Health Care Providers: Pesticides Initiative* is to improve the recognition, management and prevention of health effects from pesticide poisonings and exposures. Through the Initiative's activities, all primary health care providers are expected to acquire a basic knowledge of health effects related to pesticide exposures and an ability to take action to ameliorate such effects through clinical and preventive activities.

*National Strategies for Health Care Providers: Pesticides Initiative* is the first step in tackling the broad challenge of environmental education. Based on the supporting body of scientific knowledge and data, pesticides issues present themselves as an excellent model through which the public health community can integrate all environmental issues into the education and training of primary health care professionals. The Initiative provides an opportunity for the public health community to:

- move an environmental health issue through primary care in a coordinated, integrated manner;
- evaluate and modify its approaches over 10 years; and
- assess opportunities to broaden environmental education and practice skills of providers by applying this approach to other environmental health issues.

The Initiative is set in the broad context of environmental health and holds as its preamble the following recommendations, adopted from the Institute of Medicine<sup>2</sup>:

- Environmental health concepts will be reflected in all levels of education of primary care providers.
- Interdisciplinary approaches will be used when educating primary health care providers so as to draw upon the expertise from various disciplines.
- Environmental health content will be an integral part of lifelong learning of primary care providers.
- Professional associations, public agencies and private organizations will provide more resources and educational opportunities to enhance environmental health in primary care practice.

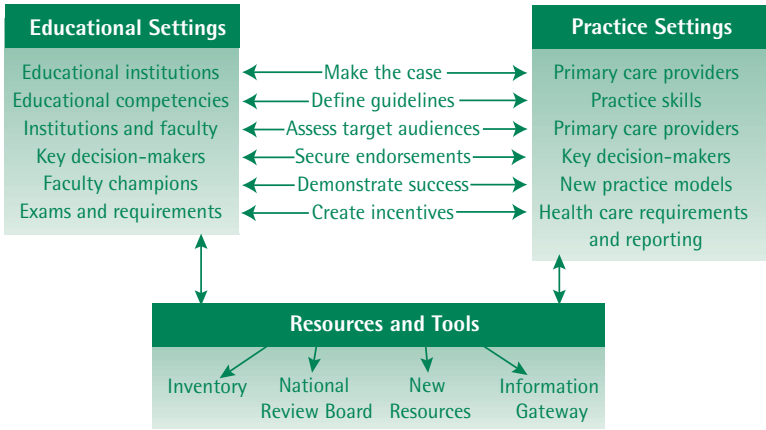
*“Even though I know it is very important to diagnose and treat this problem, we have to start by preventing the problem in the very first place. This is when we are going to start seeing some changes in the long run.”*

— Gerardo de Cosio, MD, US-Mexico  
Border Health Association



### Three-Pronged Strategy

Given that primary care providers are educated and trained in different settings, the Implementation Plan pinpoints two opportunities for education and training: a provider’s formal education and the practice setting, where the provider works and participates in professional development. Third, the Plan focuses on resources and tools needed by providers if they are to manage pesticide-related health conditions effectively.



The Implementation Plan incorporates several strategies to bring about changes within the education setting, including: defining competencies and integration strategies for curricula; assessing education settings; strengthening and building faculty champions; and creating teaching incentives.

Within the practice setting, strategies include: defining practice skills and guidelines; assessing knowledge and skills of practitioners; demonstrating model programs; and creating incentives for change.

To build and promote resources and tools for use in both the education and practice settings, the Plan sets forth several specific strategies, including: establishing a national review board; creating an information gateway; and developing teaching/learning resources for education and practice settings.

## Range of Projects

Change will be accomplished through a range of projects, some of which will span several years of the 10-year Implementation Plan, and others will encompass short-term activities. Examples of current projects include:

- ▶ **National Pesticide Competency Guidelines for Education and National Pesticide Practice Skills Guidelines:** These two documents recommend education competencies and practice skills that will lead practitioners to effective recognition and management of pesticide-related health conditions and exposures.
- ▶ **Audience Assessment of Educational Settings and Primary Care Providers:** The assessment documents the knowledge, attitudes, skills and preferred learning methods of health care provider faculty and practitioners on pesticides and environmental health.
- ▶ **National Review Board:** The national review board identifies, selects, and assesses the ideal resources that primary care providers use in both the educational and practice settings.
- ▶ **Information Gateway:** The gateway is a print, telephone, and web-based resource through which primary care providers can easily access pesticides information and education resources in one place.

## Taking Action

**W**hile the Implementation Plan defines specific expected outcomes by 2010, its success will be reflected by how well the Initiative leads to changes and improved health care in the US.

Making the Plan a reality in primary care will depend on the actions of organizations, institutions and professionals who commit to changing the way health care is delivered in America — making pesticides and overall environmental health issues an integral part of education and practice. Incentives are needed in the health care system to increase the attention that primary care providers pay to the recognition, management, and prevention of health effects from pesticide poisonings and exposures. To support these efforts, sustained funding is critical to ensure the success of the Implementation Plan. Multi-stakeholder involvement is necessary from federal agencies, academic institutions, professional organizations, foundations, farmworker and farm groups, industry and trade associations.

Leaders in health care provider professional organizations, associations, decision-making bodies, academic institutions, and practice settings can move the Implementation Plan forward in the following ways:

- ▶ **Endorsement:** Formally endorse the Plan and, in practice, support and/or use resources being developed.
- ▶ **Integrated Education:** Adopt education and practice skills standards so that primary health care providers learn and integrate information about pesticide exposures in clinical, educational, and preventive activities.
- ▶ **Competencies and Practice Skills:** Incorporate clearly defined educational competencies and practice skills for primary health care providers on pesticide exposures into education and practice.

- ▶ **Tools and Resources:** Use evaluated tools and resources to recognize, manage, and prevent health effects from pesticide exposures, which will be available through professional journals, newsletters, central internet sites, professional meetings, etc.
- ▶ **Faculty Champions:** Support the appointment of environmental health/pesticides “faculty champions” to carry out long-term environmental medical and nursing education, beginning with pesticides at educational institutions.
- ▶ **Certification, Licensing, and Accreditation:** Support updated requirements to include attention to the recognition, management, and prevention of health effects related to pesticide poisonings and exposures.
- ▶ **Model Practices:** Consider becoming a pilot primary care practice to serve as a model for effectively integrating attention to health effects from pesticides in clinical, educational, and/or preventive ways.
- ▶ **Information Gateway:** Use the information gateway to effectively guide health care providers and professional organizations to pesticide information resources and educational materials.

## For More Information

For additional information about specific elements of the Plan and the overall *National Strategies for Health Care Providers: Pesticides Initiative*, contact:

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Email: [pesticides@neetf.org](mailto:pesticides@neetf.org)

Visit the following web sites for more information and to download a copy of the Implementation Plan:

[www.neetf.org/health/providers/index.shtm](http://www.neetf.org/health/providers/index.shtm)

[www.epa.gov/pesticides/safety/healthcare/healthcare.htm](http://www.epa.gov/pesticides/safety/healthcare/healthcare.htm)

The Federal Interagency Planning Committee is responsible for oversight of the *National Strategies for Health Care Providers: Pesticides Initiative*. Members include representatives of:

US Environmental Protection Agency

US Department of Health and Human Services

US Department of Labor

US Department of Agriculture

The National Environmental Education & Training Foundation

The National Environmental Education & Training Foundation (NEETF), chartered by Congress in 1990, is a private non-profit organization that designs and implements innovative programs in life-long environmental learning. NEETF serves students as well as adults, elected and appointed officials of local, state, and federal government, and professionals in health, business, education and the media.

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