

## **Environmental Health Nursing Case Studied**

### **Study #5: Superfund Site**

#### **Observed Indications of Potential Problems**

There is an old, abandoned industrial site in the community that has been designated as a “Superfund” cleanup site. The site is being remediated, and the clean-up workers wear white suits and respirators. Young boys from the neighborhood have been quite interested in the activity and ride their bikes down to the site to watch. Young children are sometimes seen crawling and sitting on the ground near the site, as their older siblings or parents look on.

#### **Concerns Expressed by Community Members**

- What is a “Superfund” cleanup site?
- Why are the workers wearing suits and respirators?
- What are the health risks associated with the substances that are being cleaned up? Are these substances a problem with regard to air pollution? Water pollution? Soil contamination?
- Should the children be playing around the site? Are there special concerns with regard to the exposure of children?

#### **Assessment**

What information about potential health risks are you able to find from the resources cited below, or other resources? What information is missing? What would be possible approaches to obtaining further information?

(Assume that you have found out that the substances identified at the site include volatile organic compounds, lead, arsenic, cadmium and PCBs. Where would you have gotten that information?)

#### **Planning and Intervention**

Based on your research and assessment, write a brief report for the community members. Explain the basic concepts of risk and risk assessment. Give them the information that you have found related to their concerns, citing and describing your sources. Make suggestions to them for next steps. What further information do you think they need, and how can they get it? What steps do they need to take to protect their health? How would they approach these issues? Who in the community might be of assistance?

#### **Internet Resources**

*Note: Any research should include a literature search of professional journals. You may wish to use PubMed and other resources at [www.toxnet.nlm.nih.gov](http://www.toxnet.nlm.nih.gov), or perform a search at your school library.*

*Local sources of pollution:*

- Environmental Protection Agency – [www.epa.gov](http://www.epa.gov) (see “Where You Live”)
- Environmental Protection Agency – Toxics Release Inventory): [www.epa.gov/tri](http://www.epa.gov/tri)

## Internet Resources, continued

- Agency for Toxic Substances and Disease Registry (ATSDR): [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)  
(see “Hazardous Waste Sites”)

### *Specific chemicals:*

- Agency for Toxic Substances and Disease Registry (ATSDR): [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)  
(see “ToxFAQ’s” and “Toxicological Profiles”)
- National Library of Medicine – TOXNET: [www.toxnet.nlm.nih.gov](http://www.toxnet.nlm.nih.gov)
- National Institute of Environmental Health Sciences (NIEHS): [www.niehs.nih.gov](http://www.niehs.nih.gov) →  
National Toxicology Program → Chemical Health and Safety Information

### *Children’s Environmental Health:*

- Environmental Protection Agency (EPA): [www.epa.gov/children](http://www.epa.gov/children)
- Children’s Environmental Health Network: [www.cehn.org](http://www.cehn.org)

***This case is from the Kellogg Faculty Development in Environmental Health Workshop materials. The case study was developed at the Environmental Health Education Center of the University of Maryland School of Nursing. For more information, see [envirn.umaryland.edu](http://envirn.umaryland.edu).***