

**Factors to Consider When Recommending Different Types of Follow-up Activities**

Activity	Considerations	Health Assessor Notes
<p><b>Biological Monitoring:</b> The measurement of a contaminant, its metabolite, or another marker of exposure in human body fluids or tissues to confirm human exposure to a hazardous substance.</p> <p><b>Biomedical Testing:</b> Testing of persons to find out whether a change in a body function might have occurred. (Note: This activity would only occur as part of a well-designed health study.)</p>	<ul style="list-style-type: none"> <li>• Are validated and sensitive laboratory tests available to detect hazardous substances, their metabolites, or other biological markers in biological tissue or fluid to indicate exposure? Alternatively, can a measurable and sensitive exposure biomarker be identified through existing data sources?</li> <li>• Is the outcome to be measured biologically plausible and relevant?</li> <li>• Are previous experience and scientific knowledge inadequate or insufficient to predict whether biological uptake of hazardous substances or illness will occur under the present environmental site conditions?</li> <li>• Is the identified cohort of potentially exposed persons willing to participate?</li> <li>• Do community health concerns exist related to the site?</li> </ul>	
<p><b>Environmental Sampling:</b> Data obtained by sampling environmental media, such as soil, water, air, or biota (plants and animals), which are used to characterize contamination present in the environmental media where people live, spend time, play, or may otherwise come into contact with contaminants under investigation.</p>	<ul style="list-style-type: none"> <li>• Are there data gaps related to completed or potential exposure pathways needed to make a public health call?</li> <li>• Do community health concerns exist related to the site?</li> </ul>	

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<p><b>Community Health Education:</b> Programs designed to help communities understand and reduce exposure and health risks.</p> <p><b>Community Stress Education:</b> Community education designed to help members cope with the stresses of potential environmental contaminant exposure.</p> <p><b>Health Professional Education:</b> Information for doctors, nurses, or other health care providers about environmental exposures and their prevention, potential for substance-specific exposure effects, community health warning signs, or special diagnostic techniques for detecting possible site-related illnesses.</p>	<ul style="list-style-type: none"> <li>• Are people being exposed or could they be exposed in the future to the contaminants at the site?</li> <li>• Do community members express health concerns related to the site?</li> <li>• Is there concern for public health due to reports about exposures or disease in the community?</li> <li>• Has a specific request been made for health education by individuals, health care providers, special interest groups, industry, academia, or other entities related to a National Priorities List (NPL) site, a non-NPL site or facility, an emergency response site, or another site or facility?</li> <li>• Has the community expressed concerns that local, private medical practitioners or public health professionals lack information on potential exposure pathways or the potential health effects of site hazards?</li> <li>• Have public health professionals expressed concern about community stress that may be related to environmental contamination?</li> <li>• Do community health concerns exist related to the site?</li> </ul>	
<p><b>Case Study:</b> A medical or epidemiologic evaluation of a person or small group of people to gather information about specific health conditions and past exposures.</p>	<ul style="list-style-type: none"> <li>• Is there a completed exposure pathway or a documented human exposure that is occurring or could have occurred at this site? Alternatively, does a reasonable concern exist for the potential of an as-yet-unidentified route of exposure?</li> <li>• Have reports of disease in the involved population resulted in a reasonable concern for harmful health effects? Or, have there been indications or allegations of harmful health conditions in the population that might be associated with exposure to a contaminant?</li> </ul>	

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<p><b>Cluster Investigation:</b> A review of a greater than expected number of health events (e.g., reports of cancer) within a group of people in a geographic area over a defined time period. Cluster investigations are designed to confirm case reports, determine whether they represent an unusually high disease occurrence, and, if possible, explore possible causes and contributing environmental factors.</p> <p><b>Health Outcome Data Review:</b> The analysis of existing health information (i.e., from death certificates, birth defects registries, and cancer registries) to determine if there is excess disease in a specific population, geographic area, and time period. A health outcome data review is a descriptive epidemiologic study.</p> <p><b>Public Health Surveillance</b> The <i>ongoing</i>, systematic collection, analysis, and interpretation of health data.</p> <p><b>Registries</b> Systematic collection of information on persons exposed to a specific substance or having specific diseases.</p>	<ul style="list-style-type: none"> <li>• Can case information be obtained for comparison to the population under study to develop a clear study hypothesis about the relationship between hazardous substance exposure and harmful health effects?</li> <li>• Can information be collected to verify diseases and document the geographic and temporal occurrence of the cases?</li> <li>• Does biologic plausibility support a relationship between hazardous substances at the site and diseases being reported?</li> <li>• Is the age-adjusted rate of the incidence of a specific cancer significantly higher than the prevalent rate in an appropriate reference population?</li> <li>• Do community health concerns exist related to the site?</li> <li>• Is information available on relevant health outcome data for the involved population? Or, can data manipulation yield relevant health outcome information about the population (if data were not collected in a fashion that is readily applicable to the population)?</li> <li>• Has a registry already been established for the contaminants of concern?</li> <li>• Does the site fit within the general guidelines considered for a registry (i.e., has human exposure been documented; is the size of the potentially exposed population acceptable; has the presence or absence of reported health problems been verified; and is the community interested in participating)?</li> </ul>	

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<p><b>Health Study:</b> A study of the distribution and determinants of disease or health status in a population; the study of the occurrence and causes of health effects in humans.</p>	<p><i>Basic criteria</i></p> <ul style="list-style-type: none"> <li>• Is there a clear study hypothesis?</li> <li>• Is there a completed exposure pathway or documented exposure in humans?</li> <li>• Is there an adverse health effect associated with exposure to the contaminant?</li> </ul> <p><i>Methodological approach</i></p> <ul style="list-style-type: none"> <li>• Is there an appropriate/scientifically valid study design to address the hypothesis?</li> <li>• Can the population be defined?</li> <li>• Is there sufficient statistical power and sample size to detect an effect?</li> <li>• Is there a valid and reproducible way to measure the potential adverse health effects in the study population?</li> <li>• Are the results able to be interpreted?</li> <li>• Are the study results generalizable?</li> <li>• What are the known limitations and potential biases?</li> </ul> <p><i>Feasibility assessment</i></p> <ul style="list-style-type: none"> <li>• Are members of the source population able to be located and recruited?</li> <li>• Are there comparison data available?</li> <li>• Does the study cause unnecessary risk; is there an ethical issue?</li> <li>• Does the potential health study fall under the CERCLA mandate which is a requirement for studies assigned to ATSDR?</li> <li>• What is the public health significance of the issue?</li> </ul>	
<p><b>Substance-Specific Applied Research</b> A program designed to fill important data needs for specific hazardous substances.</p>	<ul style="list-style-type: none"> <li>• Does an <a href="#">ATSDR toxicological profile</a> (or other comparable review document) not exist for the substance of interest?</li> <li>• Do community health concerns exist related to the contaminant(s) at the site?</li> <li>• Is required information listed as a data need for the contaminant of concern at the site?</li> <li>• Is information on a contaminant of concern at the site missing in the existing toxicological profile?</li> <li>• Does the toxicological profile for the contaminant of interest at the site need updating?</li> <li>• Would filling identified data needs allow more accurate assessment of human risks from site exposures?</li> </ul>	