ATSDR Action Model

Who Are We?
Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency headquartered in Atlanta, Georgia. ATSDR is responsible for evaluating and protecting community health from the effects of exposure to hazardous substances in the environment.

How does ATSDR define the Development Community? The Development Community includes residents, planners, city agencies, health departments, developers, and any other stakeholders in the community of redevelopment.

Brownfield sites are defined as "abandoned, idled, or underused industrial and commercial properties where reuse or redevelopment is complicated by real or perceived contamination." These sites have received funding from EPA Brownfield Program.

Land Reuse sites are defined as "any site formally utilized for commercial and industrial purposes complicated by real or perceived contamination" that has not received funding from the EPA Brownfield Program.

The ATSDR Brownfields/Land Revitalization Action Model (ATSDR Action Model) is a grassroots, community-level model designed to foster dialogue, communication, and vision among the diverse members of the “Development Community”.

The ATSDR Action Model creates a framework to assess the impacts of redevelopment on public health, with a goal of achieving positive, sustainable improvements in overall community health.

The Action Model framework encourages the Development Community to focus on broad public health topics connected to community health, such as physical and mental health; environment; education and economy; planning; safety and security; and communication and risk communication.

The Action Model is built around four steps or questions:

1. What are the issues in the community?
2. How can development address these issues?
3. What are the corresponding community health benefits?
4. What data are needed to measure change?

Through brainstorming, answering these four questions creates a framework for incorporating positive and sustainable public health endpoints in redevelopment plans.
An example of the Action Model:

<table>
<thead>
<tr>
<th>Category</th>
<th>STEP 1</th>
<th>STEP 2</th>
<th>STEP 3</th>
<th>STEP 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Exposure to harmful substances in the environment, such as those at brownfields sites or in old housing stock, is one of many risk factors for several diseases and adverse health effects of concern (e.g., asthma).</td>
<td>Environmental cleanups at brownfields sites may reduce risk of exposure to certain harmful substances. In addition, renovation of old housing stock and construction of newer homes may help further reduce exposures to harmful substances.</td>
<td>Reduced blood lead levels, reduction of learning disabilities in children, fewer hospitalizations for asthma, fewer infant deaths, and fewer low birth weight infants</td>
<td>Hospitalizations for asthma</td>
</tr>
<tr>
<td>Community</td>
<td>Elevated crime rates are detrimental to the overall health and well-being of the community.</td>
<td>Development of abandoned sites, vacant lots, and vacant buildings may reduce areas where certain crimes occur and create a better sense of community among local residents.</td>
<td>Reduced crime-related injury and death. Reduced fear of crime, likely resulting in increased mobility of local residents.</td>
<td>Acreage of vacant lots</td>
</tr>
<tr>
<td>Community</td>
<td>Due to lower educational attainment levels, local residents may not be competitive in the labor force and thus not receive the benefits from full-time employment.</td>
<td>Improvements at existing educational facilities and development of new educational centers (e.g., vocational schools, community centers) may promote the educational development of youth in the community.</td>
<td>Increased educational attainment, employability, health insurance coverage, and understanding of health topics and information</td>
<td>Education of adults</td>
</tr>
<tr>
<td>Community</td>
<td>A lack of jobs is contributing to a high poverty rate, leaving residents with limited resources to access medical care and improve the residential infrastructure.</td>
<td>Whether through renovating abandoned or deserted buildings or constructing new ones, redevelopment activities designed to attract business can bring jobs into the community.</td>
<td>Lower unemployment rates and poverty may increase health insurance coverage. People may be able to afford better nutrition and housing, and crime rates may decrease.</td>
<td>Percentage of adults with health Benefits</td>
</tr>
<tr>
<td>Land and Environment</td>
<td>Opportunities for physical activity are limited, in part, by a lack of usable parks and &quot;green space.&quot;</td>
<td>Providing recreational facilities (e.g., basketball courts) at parks and converting vacant lots into &quot;green space&quot; may increase physical activity and strengthen the sense of community.</td>
<td>Increased physical activity, decreased likelihood of disease and health problems related to a sedentary lifestyle.</td>
<td>Acreage of parks</td>
</tr>
<tr>
<td>Land and Environment</td>
<td>Community members may be exposed to physical and environmental hazards when brownfields sites are not cleaned up</td>
<td>Clean-up activities at brownfields sites and other sites with contaminated land will reduce harmful exposures in the community.</td>
<td>Reduced disease and injury as a result of harmful exposures. Increased opportunity for redevelopment.</td>
<td>Contaminated land</td>
</tr>
<tr>
<td>Buildings and Infrastructure</td>
<td>Vacant and poorly maintained buildings can expose residents to health hazards and increase the perception of blight in the community.</td>
<td>Redeveloping commercial buildings can create new jobs, and new or renovated housing units can reduce exposures to harmful environmental contaminants (e.g., lead) and improve residents' quality of life.</td>
<td>Decreased exposure to environmental contaminants, and decreased childhood blood lead levels. Reduction in crime, and increase in employment.</td>
<td>Commercial properties</td>
</tr>
</tbody>
</table>

The Action Model has been used in community health pilots in cities across the nation.

- Milwaukee, WI, 30th Street Corridor
- East Cleveland, OH, Cuyahoga County
- Detroit, MI, 48217 Approach
- Blue Island, IL, Cargo- and Transit-Oriented Development Community Health Monitoring
- Linnton, OR, Linnton Action Model Project
- Baraboo, WI, Ringling Riverfront Development
- St. Paul-Minneapolis, MN, Healthy Communities Count! Healthy Communities and the Central Corridor Light Rail Transit Line
- Your Community?

To learn more about the ATSDR Action Model:
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