## Haddon Matrix Applied to the Problem of Residential Fires

<table>
<thead>
<tr>
<th></th>
<th>Host (children, elderly, adults in home)</th>
<th>Agent/ Vehicle (cigarette, matches, appliances, heaters, and upholstered furniture)</th>
<th>Physical Environment (home)</th>
<th>Social Environment (community norms, policies, rules)</th>
</tr>
</thead>
</table>
| **Pre-event** (before fire starts) | • Teach children not to play with matches  
• Provide information about fire risk and cooking (loose clothing, long hair, etc., may catch on fire)  
• Lower flammability of structures  
• Install smoke detectors  
• Design heaters with quick and easy shutoff device  
• Build homes with less toxic building materials  
• Increase availability of burn treatment facilities  
• Improve efforts to curb smoking initiation  
• Improve smoking cessation efforts | • Redesign cigarettes so they self-extinguish  
• Automatic shut-off for appliances such as coffee makers.  
• Inspect and clean chimneys, heating systems each year.  
• Insure adequate emergency escape exits from home  | | |
| **Event** (during fire) | • Teach children to stop, drop and roll  
• Plan and practice a fire escape route with children and adults  
• Teach children not to hide during a fire  
• Install sprinklers  
• Increase number of usable exits  
• Pass ordinances requiring smoke detectors and/or sprinkler systems  
• Fund the fire department adequately to provide enough personnel and equipment for rapid response | • Design furniture with materials that are less toxic when burned  
• Design upholstery that is flame resistant  
• Provide first aid and CPR to all family members  | | |
| **Post-event** (after child or person injured by fire) | • Provide first aid and CPR to all family members  | • Design heaters with quick and easy shutoff device  | | |

Source: Dr. Carol Runyan, University of North Carolina, Injury Prevention Research Center.