

Haddon's Matrix

Haddon's Matrix is a brainstorming tool that combines the epidemiology triangle (host, agent, environment) and levels of prevention. This combination gives you a way to look at planning for injury interventions and prevention strategies (step 3) by phases in time of the event. This exercise is also useful when used in conjunction with planning your data collection. Remember, interventions that address multiple levels, more than one "E," and/or different boxes of the Haddon's matrix are most effective for injury prevention.

The goal is to fill in the 12 empty boxes where the two elements intersect with a risk factor or potential intervention strategy. Then you can see that there are multiple points one could intervene in preventing (pre-event) or reducing (event or post) injuries from an injury event (motor vehicle crash, drowning, fall, etc.) See website for some more examples and blank worksheets.

	Host	Agent	Physical Env't	Social Env't
Pre-Event				
Event				
Post-Event				

Assess the contributing factors or characteristics from the perspective of:

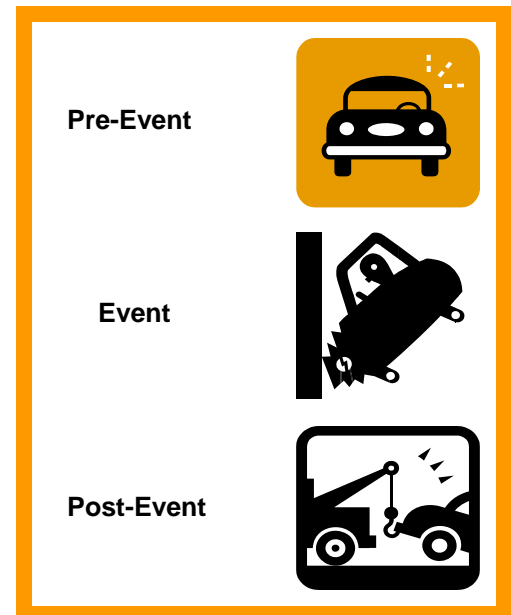
1. Host or Human Factors;
2. Agent of Energy or Vehicle (such as crashworthiness of a vehicle)
3. Physical Environment (such as Roadway design or safety features)
4. Social Environment (such as passage and enforcement of seat belt laws)

Combine with time phases

1. Pre-Event: What factors affect the host before the event occurs?
2. Event: What are Factors related to the crash phase?
3. Post-Event: What are Factors related to the Post-Event Crash Phase?

Example: Motor Vehicle Injury Problem. Where might we be able to intervene to decrease the problem in a community?

1. **Pre-Event** (before the crash took place)
 - Host.... Driver experience/ training
 - Agent.... Speed
2. **Event** (during the crash)
 - Host... Seat belt use
 - Agent... Safety Rating
3. **Post-Event** (after the crash)
 - Host... General health status
 - Env't... Distance to trauma care



Steps in Using the Haddon Matrix

- Step 1:** Use community data to determine injury problem that requires an intervention.
- Step 2:** Brainstorm potential ideas for interventions and fill them into the cells of Haddon's Matrix.
- Step 3:** Make decisions about best intervention options based upon effective strategies and practical to implement in your local situation.

Practice Exercise

Use a blank Haddon Matrix to practice the benefits of this theory and how it is helpful in injury prevention. There are completed sheets on the website showing potential answers. Injury topics can include dog bites, motor vehicle crashes, school violence, workplace violence, and burns.

References

- Christoffel, Tom, and Susan S. Gallagher. Injury Prevention and Public Health. 2nd ed. Jones & Bartlett, 2005.
 National Committee For Injury Prevention And Control. Injury Prevention: Meeting the Challenge. Oxford UP, 1989.
 Dr. Carol Runyan, Director, University of NC Injury Prevention Research Center