

The Three Es

This is one of two brainstorming tools used to identify injury risk factors and intervention strategies. The other is Haddon's Matrix. See website for more information on this.

One way we conceptualize or describe injury prevention efforts is by categorizing them into three categories...referred to as the 3 Es.



Environment approaches deal with making the environment or product safer.

Education approaches deal with providing information to individuals.

Enforcement approaches rely on requiring change through laws.

Often these approaches are viewed independent of one another, but ideally comprehensive injury prevention projects employ strategies that include each.

Example: Child Poisoning

- Lock cabinets / Medicines out of reach / Safety caps (Environment)
- Provide information and training to parents (Education)
- Packaging Laws (Enforcement)

Environmental Approach

The environmental approach refers to making changes in our environment to reduce injury risks. The environment we refer to includes our physical surroundings (roadway), products (vehicles), and the social environment (societal attitudes towards drinking and driving).

The environmental approach is the one strategy that involves injury reduction measures that are not dependent on action by those being protected; they are passive, automatic, and constant in their protective effects. As a result, the environmental approach is considered the most effective strategy, and it is commonly an overlooked approach. In some cases we have the technology available to make products safer but industry has not adopted the technology, often due to no economic incentives to do so.

The environment refers to:

Physical Surroundings
Product Design
Social Environment

Key Concepts for Environmental Modification:

Design Safer Surroundings

- Pool Fencing
- Handrails
- Anti-slip Surfaces
- Playground Surfaces
- Roadways
- Bike/Walking Paths

Design Safer Products

- “Kill Switches”
- Childproof Packaging
- Crib Slat Spacing
- Flame Resistant Sleepwear
- Vehicle Design

Protocols & Practices

- “Traffic Calming”
- Walk-light Timing at Crosswalks
- Bus Stop Placement
- Lighting for Crime Reduction
- Factor Settings for Water Heaters

Social Environment

- Drunk Driving
- Domestic Violence
- Violence on Television
- Safety Devices

Education Approach

Preventive measures involving the education of the population at large, targeted groups, or individuals and efforts to alter specific injury-related behaviors. Many injuries result less from lack of knowledge than from failure to apply what is known.

Three Goals:

1. Provide information regarding injury risks and how to avoid them.
2. Change attitudes away from risks and towards more safer practices.
3. Alter behaviors. Not enough to know that seatbelts save lives, but one must actually use the seat belt for it to be effective.

Educational Approach is Appropriate when:

1. New knowledge about a risk is needed (Firestone tire recall, airbags& car seats)
2. No other approach exists (child choking with common objects like hot dogs)
3. Influence decision makers, law makers, and design engineers.
4. Teach specific behaviors and skills (calling 911, crawl under smoke)

Some Limitations of the Education approach :

1. Uses an active approach. Passive approaches are preferred.
2. Inappropriate message for target audience. Targeted, at-risk populations are not always reached through mass-media educational campaigns.
3. Variations in learning style among adults and possible language barriers. In education, “one size doesn’t necessarily fit all”. There are variations in learning styles among children and adults, cultures, and socio-economic status.
4. Cultural acceptance of the message. Messages should be tested with a focus group to make sure they are not offensive.

Enforcement Approach

A strategy that seeks **to require** change in behavior, the environment, or product by enacting law/policy. We direct enforcement initiatives or laws toward the individual, products, or environmental conditions. Laws can require. Laws can prohibit.

Laws and the Individual

- Require:
- seatbelt and child restraint use
 - helmet use
- Prohibit:
- drunk driving
 - excessive speed

Laws and Products (Things)

- Require:
- motor vehicle standards
 - child proof packaging
- Prohibit:
- fully automatic weapons
 - flammable fabrics

Laws and the Environment

- Require:
- swimming pool fence
 - smoke detectors
- Prohibit:
- firearms in airport/schools
 - rigid structures on highways

Successful Laws have these characteristics:

1. Few exceptions to compliance.
2. Easy detection (measuring speed with radar, observing helmet use)
3. Punishment is certain, swift, and sure
4. Publicity about enforcement. Enforcement and laws can have a much greater impact on changing behavior when enforcement is highly visible and media is used to let the public know that enforcement campaigns are going on. For example information about sobriety checkpoints, or seat belt checkpoints.

Summary of The Three Es Model

1. Avoid pitfall of assuming that injury is caused by one specific thing.
2. Especially avoid the pitfall that injury occurs as a result of human behavior and an educational approach is the best strategy.
3. Understand that the best strategy is one that employs a combination of all of the three Es in the Model.

References

Christoffel, Tom, and Susan S. Gallagher. *Injury Prevention and Public Health*. 2nd ed. Jones & Bartlett, 2005. (2005 is the most current version of the book) (The older edition was also used for this information See page 139-199 of the 1999 edition)