Sustaining Momentum for Prevention: Stories from 30+ Years of Preventing Injury and Violence

National Conference of State Legislatures
June 24, 2016
Let’s take a trip back in time . . .

. . . and across the country
U.S. Experience with Terrorist Attacks—Oklahoma City Bombing

Sheryll Brown, M.P.H.
Oklahoma State Department of Health

National Blast Injury Awareness Conference
May 9-10, 2005
Alexandria, VA

Epidemiology of Terrorist Events
Sue Mallonee, R.N., M.P.H.

Physical Injuries and Fatalities Resulting From the Oklahoma City Bombing

Sue Mallonee, RN, MPH; Sheryl Shanafelt, MPH; Gail Sterens, MD, MPH; Fick Warneker, PhD;
David Viglione, DO; Fred Jordan, MD

Objective—To provide an epidemiologic description of physical injuries and fatalities resulting from the April 19, 1995, bombing of the Alfred P. Murrah Federal Building in Oklahoma City.

Design and Setting—Descriptive epidemiologic study of all persons injured by the bombing and all deaths among the federal building and 4 adjacent buildings. Data were gathered from hospital emergency and medical records department, medical examiner records, and survey of area physicians, building occupants, and survivors.

Study Population—All persons known to have been exposed to the blast.

Main Outcome Measures—Characteristics of fatalities and injuries, injury severity, and injury patterns by building location.

Results—A total of 759 persons sustained injuries, 167 persons died. 80 persons were hospitalized, and 500 persons were treated as outpatients. Of the 361 persons who were in the federal building, 319 (94%) were injured, of whom 163 (45%) died, including 19 children. Persons in the collapsed central part of the federal building were significantly more likely to die (122/175, 71%) than were those in other parts of the building (106/584, 18%) (risk ratio, 3.5; 95% confidence interval, 2.3-5.1). In 4 adjacent buildings, injury rates varied from 38% to 100%; 3 persons in these buildings and 1 person in an outdoor location died. The most frequent cause of death was multiple injuries. Among survivors, soft tissue injuries, fractures, lacerations, abrasions, and head injuries were most common; these injuries were most frequent among children. Of 138 children injured, 18 (13%) died. 127 persons who sustained injuries required hospital admission. 46 (79%) of these patients required surgery.

Conclusions—The Oklahoma City bombing resulted in the largest number of deaths and injuries from an act of terrorism in the United States, and there were 4 times as many nonfatal injuries as fatalities. Disaster management plans should include the possibility of a terrorist bombing, and medical parameters should anticipate that most injuries will be nonfatal. The role of building collapse in fatal injuries and the role of glass and other flying debris in minor to moderate injuries should be considered in the design of buildings at high risk of being bombed so as to reduce injuries. (Am J Med 2000;109:596-602)

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Psychiatric Disorders Among Survivors of the Oklahoma City Bombing

[Original Contribution]

North, Carol S. M.D., MPE; Nixon, Sara Jo PhD; Shariat, Sheryl MPH; Mallonee, Sue RN; Dough M.P.H.

George Warren Brown Washington University School of Medicine St. Louis, MO

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Also, in Oklahoma in 1995 . . .

- 717 traffic deaths
- 502 suicides
- 260 homicides*
- 113 fall deaths among persons 65+
- 80 drownings
- 60 residential house fire deaths
March 27, 2005

TEXAS
Injuries ... destroy the health, lives, and livelihoods of millions of people, yet they receive scant attention, compared with diseases and other hazards.

Injury in America
1985
Medical Care Alone Cannot Reduce Injuries

- Not the primary determinant of health
- Treats one person at a time
- Often comes late; can’t always restore health

“Prevention is better than cure.”
Desiderius Erasmus
1466-1536
Effective primary prevention:

• Saves Lives
• Saves Suffering
• Saves Money

Source: U.S. Preventive Services Task Force; Prevention Institute
Ten Greatest Public Health Achievements of the 20th Century

• 1966 – Highway Safety Act and the National Traffic and Motor Vehicle Safety Act

• Changes in both vehicle and highway design followed this mandate

• Enactment and enforcement of traffic safety laws
  – Seat belt and child passenger restraint laws
  – .08 BAC laws
  – Minimum drinking age laws
  – Ignition Interlocks
  – Graduated Driver Licensing laws
FIGURE 1. Motor-vehicle-related deaths per million vehicle miles traveled (VMT) and annual VMT, by year — United States, 1925–1997
1973
Effect of Childproof Packaging Law on Childhood Poisoning Deaths

Aspirin Poisoning Deaths in Children 0-4 years

Law - 1973

1960

1988
Need comprehensive approaches
2009

WILKES COUNTY, NC
Project Lazarus

• Unintentional poisoning rate was quadruple the state rate

• Project Lazarus
  – Community activation and coalition building
  – Monitoring and surveillance data
  – Prevention
  – Risk reduction – Naxalone
  – Evaluation

• Death rate dropped from 46.6/100,000 pop. In 2009 to 29.0/100,000 pop. In 2010*
2009
MADISON/DANE COUNTY, WI
“Injuries can be prevented with a variety of strategies... The effectiveness of these strategies varies inversely with the extra effort required ... and the degree to which people must change their usual behavior patterns.”

IOM. *Injury in America*. 1985
Likelihood that protection will result

Maximum

Subtoxic dose in container
Childproof blister packaging
Childproof cap on container
Locking cabinet after every use

Minimum
Watching child at all times

Passive
Active

Example of active and passive strategies to prevent poisoning in children
Blame the victim . . .
Train the victim

Do this . . .

Don’t do this . . .

Injury Prevention Center of Greater Dallas
“Too often, we try to educate people to protect themselves and their children with behaviors that are bothersome and must be frequently repeated, in the vain hope that a desire for “safety” will be all the incentive that is needed. Yet whenever such educational efforts have been competently evaluated, a lack of success has been demonstrated. Despite all the evidence that posters, pamphlets, media campaigns, and other educational programs have not produced changes in daily behavior that would effectively reduce injuries, we often rely on this kind of approach, spending enormous amounts of money and person-years of labor on ineffective or unproven efforts. The tragic result is that limited resources are used up and approaches with far greater likelihood of success are ignored.”

Susan P. Baker
Professor – Emeritus
Johns Hopkins Bloomberg School of Public Health
• 3-year-old crawled through bushes and fell into the gorilla habitat
• Barrier is insufficient to keep child out, yet there is a huge outcry against the family for “not watching their child closely”
• Zoo plans a higher, reinforced barrier
Too many programs based on emotion, when they should be based on EVIDENCE.
4. Fear appeals for individuals in different stages of change: intended and unintended effects and implications on public health campaigns. Cho H1, Salmon CT.
Strategies that have NOT been shown to increase safe behavior or reduce deaths

- Community campaigns – purely educational campaigns
- Exclusive focus on information
- Scare tactics
People LOVE it!
It’s AWESOME!!!
It’s so IMPACTFUL!
If we help just **ONE**
person, it’s worth it!
We’ve been doing this program for YEARS!
The Cost of “Uninformed” Action

An “anything is better than nothing” approach to injury prevention creates the risk that non-strategic interventions will be implemented in the community with negative consequences for all injury prevention initiatives.

Carolyn Cumpsty Fowler, Ph.D., M.P.H.
Johns Hopkins School of Nursing
Ineffective Strategy to Prevent Child Drowning

• Water Safety Act of Texas
  – Raise awareness of childhood drownings;
  – Encourage citizens of the Lone Start State to exercise caution; and
  – Reinforce the message that water safety is everyone’s responsibility
Effective Strategy to Prevent Child Drowning

• Isolation pool fencing is 73% effective in preventing drowning or near drowning as compared to no fencing.
• Fencing that completely encircles the pool and isolates it from the house is much more effective than methods where children can still gain access to the pool.

VISION 410

FOCUS CITIES

Austin | Boston | Chicago | DC | Fort Lauderdale | LA | NYC | Portland | San Francisco | Seattle
How do we find what works?
Steps for Selecting Evidence-Based Programs

1. **RELEVANT?**
   - Identify interventions addressing populations that fit the data – based priority problems, goals & objectives.

2. **EFFECTIVE?**
   - Evidence of effectiveness based on:
     - Recognized practice
     - Scientific reports
     - Documented experience & Judgment

3. **APPROPRIATE?**
   - Select programs and practices that will fit with:
     - Resources
     - Capacity
     - Readiness & Compliment Existing Efforts

From Cary Cain, MPH, BSN, RN; Texas Children’s Hospital
Adapted from Identifying & Selecting Evidence-Based Interventions, SAMHSA, January 2007
What are acceptable sources?

- CDC: Guide to Community Preventive Services, Guide to Clinical Preventive Services
- The California Evidence-Based Clearinghouse for Child Welfare
- National Center for the Review & Prevention of Child Deaths
- Substance Abuse and Mental Health Services Administration
- NHTSA Countermeasures that Work
- Google Scholar
- Cochrane / Campbell Collaboration Reviews
- CDC: National Center for Injury Prevention & Control

Adapted from Paula Yuma, PhD, MPH, CHES
Resources

The Facts Hurt:
A STATE-BY-STATE INJURY PREVENTION POLICY REPORT 2015, Trust for America’s Health
Spectrum of Prevention

Influencing Policy and Legislation
Changing Organizational Practices
Fostering Coalitions and Networks
Educating Providers
Promoting Community Education
Strengthening Individual Knowledge and Skills

www.preventioninstitute.org

David Hemenway, Ph.D.
Professor of Health Policy
Director, Harvard Injury Control Research Center
“It always seems impossible until it’s done.”

– Nelson Mandela
May 25, 1961

JOINT SESSION OF CONGRESS
“I believe that this Nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and...” returning him safely to earth.”
To a plan...
To a group of brave individuals . . .

Adapted from Stewart Williams, Dell Children’s Medical Center, Austin, TX
To an engineered marvel...
That resulted in a small step . . .

and a giant leap
And a safe return to earth

Adapted from Stewart Williams, Dell Children’s Medical Center, Austin, TX
All because of a dream, a plan and well designed evaluation

Adapted from Stewart Williams, Dell Children’s Medical Center, Austin, TX
Observed Seat Belt Use, Oklahoma, 1986-1997

Percent of Seat Belt Use


47%
Unintentional Motor Vehicle Occupant Death Rates by Year, Oklahoma, 1992 – 2007

Rate per 100,000 Population

January 26, 2007

KONAWA, OK
Thank you for the BIG things you do to save lives!

Shelli Stephens-Stidham
Shelli.Stephens-Stidham@phhs.org