Where CDR Meets Injury Prevention: Strategies for Implementing Best Practices

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What does CDR have to do with injury prevention?
we are getting good at learning what works but we struggle to promote and implement best practices in real world settings
best practice + local assessment → implementation
What are the **functions** of child death review?
Sentinel Event:

Unexpected Child Death
Investigative Function:

Can we verify the cause & manner of this death?
QA Function:

Did community systems function as anticipated?
Prevention Function:

Can we learn from this death to prevent future deaths?
The CDR process is incomplete until prevention is addressed.
What kills children?
Injury kills children.
Unintentional injury is the major cause of mortality for children after age 1

- US data 2006
Child Deaths, by Age & Cause
United States - 2006

- Unintentional Injury
- Suicide
- Homicide
- Other

Age of Decedent:
- 1-4 yrs
- 5-9 yrs
- 10-14 yrs
- 15-19 yrs

Number:
- 15-19 yrs: 12,000
- 10-14 yrs: 4,000
- 5-9 yrs: 2,000
- 1-4 yrs: 2,000

- Unintentional Injury
- Suicide
- Homicide
- Other
We know how to prevent injuries.
What is the role of CDR in injury prevention?
Public health model:

Policy Development

Assessment

Assurance

Policy Development
Epidemiologic Surveillance

Monitor rates & trends
Presume that someone responds
CDR is different

intensely local
individual cases
detailed assessments
no obvious recipient
for resultant data
CDR is more like the NTSB than like the CDC
“an independent agency charged with investigating every civil aviation accident in the US and issuing safety recommendations aimed at preventing future accidents”
“... the NTSB does not regulate equipment, personnel or operations, and does not initiate enforcement action, yet more than 82 percent of its recommendations have been adopted by those in a position to effect change.”
Why do CDR teams have difficulty influencing injury prevention?
Why do CDR teams have difficulty influencing injury prevention?

Inadequate Data
Why do CDR teams have difficulty influencing injury prevention?

Narrow Team Membership
Why do CDR teams have difficulty influencing injury prevention?

Restrictive Forms & Protocols
Why do CDR teams have difficulty influencing injury prevention?

Lack of Resources
Why do CDR teams have difficulty influencing injury prevention?

Uncertain Accountability
Why do CDR teams have difficulty influencing injury prevention?

Poorly Framed Recommendations
Recommendations: A Crucial Final Step
Recommendations: A Crucial Final Step

Synthesize data
Identify opportunities for improvement
Look for evidence-based “best practices”
Promote implementation of desired solution
Recommendations:

“Babies should be properly restrained in cars.”
Recommendations:

“Parents need to constantly supervise their children near swimming pools.”
Recommendations:

“Rearview cameras allow drivers to see small children behind the vehicle before reversing.”
Recommendations:

“The schools should provide free driver’s education to all teens.”
What makes a recommendation “good?”
A good recommendation:

Refers to local data and contexts
A good recommendation:

- Refers to local data and contexts
- Applies knowledge of best practices
A good recommendation:

Refers to local data and contexts
Applies knowledge of best practices
Identifies incremental next steps
A good recommendation:

- Refers to local data and contexts
- Applies knowledge of best practices
- Identifies incremental next steps
- Is specific and actionable
A good recommendation:

- Refers to local data and contexts
- Applies knowledge of best practices
- Identifies incremental next steps
- Is specific and actionable
- Is made with accountability and follow-up
EMSC Grant

Helping CDR teams make better injury prevention recommendations
EMSC Grant

We worked with

5 Washington State CDR teams
19 non-intervention control teams
Washington State Department of Health
EMSC Grant

We provided

team training

technical assistance – collaborative
process improvement

access to web based expert resources
Process Improvement Strategies

broaden CDR team membership
Process Improvement Strategies

broaden CDR team membership

create a Prevention Action Team
Process Improvement Strategies

group discussions by death mechanism
Process Improvement Strategies

group your discussions by death mechanism

invite content experts to specific meetings
Process Improvement Strategies

monitor missing data & identify likely sources
Process Improvement Strategies

keep meeting minutes & “action items”
Process Improvement Strategies

keep meeting minutes & “action items”

... the work isn’t done when the report gets sent to the State!
Process Improvement Strategies

use a template to compose your prevention recommendations
TEMPLATE FOR WRITING AN EFFECTIVE RECOMMENDATION

The Importance of Prevention in Child Death Review:
Child Death Review teams should not consider a review complete without asking: “What are we going to do to prevent this from happening again?” There is prevention potential for all natural, intentional, unintentional, and even undetermined child deaths. Reviews should be seen as opportunities to examine the issues involved, in order to identify any preventive action that could be taken by individuals, agencies, the larger community, or the state.

How this form is useful and who should use it:
This recommendation generator form was adapted from the “Effective Recommendation Writing Guidelines” developed for California Child Death Review Teams through the FCAHS Program of the EPIC Branch, California Department of Health Services’. This tool can be used to formulate effective recommendations, identify key individuals (intervention actors, recipients, person(s) accountable) and follow up on recommendations for preventive action. Use this template as a guideline to shape discussion as your team crafts its prevention recommendations.

Child Death Review Teams do not have to lead the prevention action through from start to finish. Utilizing appointed subcommittees, task forces, coalitions, or partnerships with existing community agencies are options for acting on recommendations. This recommendation template can be used by Teams or agencies that: a) craft the preventive action to be carried out; b) carry out the recommendation action; or c) follow-up on the proposed action.

Step 1: Assess the Problem

A. Problem Statement:

Define the problem. What child death mechanism and intent are you addressing?

How prevalent is this problem? Try to reference local, state, or national data. Consider polling other CDR teams if you suspect this child death mechanism is under-reported or under-recognized.

List any risk or protective factors that seem relevant to the stated problem. What makes some children more or less vulnerable to this death mechanism?

B. Evidence-Based Prevention Strategies (Best Practices)

Can your team identify any proven or promising strategies to prevent these deaths? What evidence exists to support the efficacy of these strategies? Are the strategies likely to be equally effective in your community when applied to the population you hope to target?
Process Improvement Strategies

identify & refer to best practice resources
Decision Support Tool

Web-based:
(http://depts.washington.edu/cdreview)
Decision Support Tool

Review of prevention strategies for death due to:

drowning
youth suicide
motor vehicle occupant injury
firearms
child abuse
Decision Support Tool

Selection of intervention based on rating, population or strategy
Decision Support Tool

Replication resources for intervention identified as “recommended” or “promising”
List of Potential Interventions

Rating: All Ratings
Population: All Populations
Strategy: All Strategies

Overview

In the United States, 1,236 children (0-18) died from drowning in 2000. Males are at a much higher risk of drowning than girls; one study found that on average, three-quarters of all drowning victims are male. Toddlers, especially boys under age four, are at highest risk of drowning. Children living in rural areas are also at higher risk because of their proximity to open bodies of water. Most child drownings occur when a supervising adult is distracted.

A study in the Journal of Pediatrics reported on the relationship between the child’s age and place of drowning. This study found that babies most often drown in bathtubs when left unattended, even for a few minutes. Toddler drowning most often occurs in swimming pools or backyard ponds. Most children who drown in pools were last seen inside the home or just outside of the home (not necessarily near the water) and had been out of sight of the caretaker for less than five minutes. Older children more often drown in open bodies of water (lakes, rivers, oceans, gravel pits).

Alcohol use is involved in about 25% to 30% of adolescent and adult deaths associated with water recreation. It is a major contributing factor in up to 30% of drownings among adolescent boys. Nearly three-quarters of boating-related deaths are due to drowning; 85% of people who drowned while boating were not wearing personal flotation devices.

Common Resources

- WISQARS Injury Mortality Reports
- WISQARS Years of Potential Life Lost (YPLL) Reports
- Washington State Injury Data Tables
- WA State Child Injury Report
- KidsCount Census Data Online
- WISQARS™

PubMed Update

Click here to search PubMed for articles from 2003/06/01-2009/02/28.

SafetyLit

New articles from www.SafetyLit.org

- SafetyLit: Recreational and Sports Issues
- Application of eccentric exercise on an Australian Rules football player with recurrent hamstring injuries.
- Brazzilian physiotherapy services in the 2007 Pan-American Games: injuries, their anatomical location and physiotherapeutic procedures.
- Concussion in hockey: compliance with return to play advice and follow-up status.
- Correlating cumulative sub-concussive head impacts in football with player performance.
- Evaluation of eye injury risk from projectile shooting toys using the focus headform.
- Foot and ankle injuries during the Athens 2004 Olympic Games.
- Hypothermia is a significant medical risk of mass participation long-distance open water swimming.
- Increased All-Terrain Vehicle Crash Accidents in Older Riders.

For more articles please visit SafetyLit RSS feeds.

Top
List of Potential Interventions

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<thead>
<tr>
<th>Rating</th>
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<tr>
<td>Population</td>
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</tr>
<tr>
<td>Strategy</td>
<td>All Strategies</td>
</tr>
</tbody>
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Search

These interventions meet your criteria:

- Community CPR Knowledge
- Increase Appropriate Adult Supervision
- Increase Life Guard Presence
- Pool Alarms & Other Monitoring Devices
- Promote Approved PFD Use

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BEST PRACTICES: Drowning
Increase Life Guard Presence

Description
Risk & Protective Factors Targeted
Prospective studies to assess the contribution of life guards to swimming safety would be very hard to conduct. A 2001 report by CDC's Injury Center used observational data over time to measure the impact of lifeguards as a strategy for preventing drowning and water-related injuries. The report reviews data from the United States Lifeguard Association (USLA) and other sources.

Data show that during 1988-1997, more than three-quarters of drownings at USLA sites occurred when beaches were unguarded and that the chance of drowning at a beach protected by lifeguards trained under USLA standards is less than 1 in 16 million.

Interventions to increase the presence of lifeguards might include public policy or legislation. We found no studies that assessed the effect of any such intervention on drowning rates.

Key Features
Life guards must be trained to recognize and respond to dangerous situations and to swimmers in distress. Standards for the amount and frequency of training, use of adjuncts to monitoring in crowded environments, and optimal working conditions to maximize attentiveness and awareness have not been subject to scientific evaluation.

Evaluation & Outcomes
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Rating (Last updated: July 2005)
Promising - there is some evidence from studies to date and/or expert opinion that this intervention is likely to be helpful. Application of this intervention should be considered as part of an injury prevention strategy.

Would This Intervention Be Appropriate in Our Community?
Incident Specific
• Was the drowning site a place where lifeguard supervision would have been present at other times of day/week/month?

Additional Information & Ideas
United States Lifesaving Association
The importance of prevention in Child Death Review

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How this form is useful and who should use it

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b. carry out the recommendation action; or
c. follow-up on the proposed action.

This document was adapted from the “Guidelines for Writing Effective Recommendations” tool developed through the joint efforts of Stephen Wirtz, PhD and Velasto Foster, MPH of the Fatal Child Abuse and Neglect Surveillance Program of the Epidemiology and Prevention for Injury Control Branch, California Department of Health Services.

This recommendation template form was made available through an Emergency Medical Services for Children Targeted Issues grant “Improving Injury Prevention Capacity in the Child Death Review Process” (H34MC02543) through a partnership between the Washington State Department of Health, the Harborview Injury Prevention and Research Center, and the Seattle Children’s Hospital and Regional Medical Center. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the California Department of Health Services or the Emergency Medical Services for Children Program.
Outcomes
Quality of Recommendations

![Bar chart showing outcomes in comparison baseline, comparison follow-up, intervention baseline, and intervention follow-up.](chart.png)
Next Steps

Move decision support site to multistate CDR database
Next Steps

Add & update topics
Next Steps

Share what we have learned
Lessons Learned
Lessons Learned

Successful teams make prevention a priority
Lessons Learned

CDR teams can improve the quality of their prevention recommendations
Lessons Learned

It is crucial to value the recommendation process
Thank you!

- National Center for Child Death Review
- Washington State Department of Health
- Child Death Review Teams from
  - Benton-Franklin Counties
  - Kitsap County
  - Seattle-King County
  - Spokane County
  - Tacoma-Pierce County
- Steve Wirtz, PhD
- Seattle Children’s Hospital

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