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*Preventing Child and Adolescent Deaths:
Resources and Partnerships*

Thursday, December 14, 2006
1:00-2:00 pm EST

Hosted by:
*U.S. Department of Health and Human Services,
Health Resources and Services Administration,
Maternal and Child Health Bureau*

CAPTAIN Dan Kavanaugh, MSW, LCSW-C
HRSA, MCHB

Director, Emergency Medical Services for Children

Web Cast Goals

- To identify strategies for including injury prevention into the child death review process.
- To discuss barriers and solutions related to the prevention of child and adolescent deaths.
- To demonstrate a new website that serves as a resource for best practices to child death review team members and injury prevention professionals.
- To become familiar with the web-based Child Death Review Case Reporting System and how comprehensive data collection can assist teams in targeting their recommendations for prevention.

Improving Injury Prevention Capacity in Child Death Review

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December 14, 2006



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1 H34MC02543

Overview

- Child death review (CDR) and injury prevention
- Barriers to prevention in CDR
- Promoting effective prevention in CDR
- Development and dissemination of injury prevention resources for CDR Teams

Child Death Review

- Define child death review
 - Historical roots
 - Current status
- A typical team
- Expected outcomes
 - Investigation
 - Services
 - Prevention

CDR & Injury Prevention

- Injury as a major cause of child mortality
 - Injury is the leading cause of child death after infancy
- Data in depth
 - CDR teams have access to richer data than can be reflected in aggregate statistics
- Local trends & resources
 - CDR teams can recognize local patterns of child risk not evident in aggregate statistics
- An unfulfilled promise?

Barriers to Injury Prevention in CDR

Inadequate Data

- Many data elements required to understand prevention opportunities are not collected at time of death
- Agencies or individuals with access to these data may not be represented on CDR team

Barriers to Injury Prevention in CDR

Forms and Protocols

- Data collection forms are concise: lack specificity for prevention-oriented review.
- Data collection forms do not permit drafting a full recommendation.
- CDR team needs to discuss injury prevention options and action steps.

Barriers to Injury Prevention in CDR

Membership

- Teams originally convened to perform an investigative function
- May lack members with skills or connections to translate prevention recommendations into action.

Barriers to Injury Prevention in CDR

Lack of Expertise / Leadership

- Most local teams do not include an injury prevention practitioner
 - Prevention recommendations may thus be global, vague, generic, or not actionable.
- CDR team leaders are crucial in motivating a prevention-focus on their teams.
 - Turnover
 - Lack of training in prevention practice

Barriers to Injury Prevention in CDR

Focus on “Preventability”

- Teams assess the preventability of a death
 - Often limited to identification of prevention achievable through optimal functioning of public agencies, coordination of public systems, or formulation of public policy
- Deaths not “preventable” in this sense are not considered with respect to broader prevention opportunities.

Barriers to Injury Prevention in CDR

Accountability

- In many jurisdictions, unclear to whom preventions recommendations are directed
- Submission of data to state repository seen as the goal of the process
 - Local action on local issues is forfeit

Barriers to Injury Prevention in CDR

Funding & Mandate

- Teams are typically only be funded to conduct information gathering and synthesis.
 - Need coordination with other agencies to effect prevention
- Mandate may specify investigative functions but not prevention

EMS-C Grant Goals and Objectives

- Increase the quality of injury prevention recommendations made by CDR teams;
- Develop injury prevention expertise on local CDR teams;
- Identify strategies to overcome barriers to prevention-oriented child death review;
- Develop a decision support tool to promote CDR access to best practices in injury prevention

Grant Status

- HRSA / EMS-C Targeted Issue Grant
- Funding: 2004-2007
- Focus:
 - Technical assistance
 - Training
 - Decision support resources

Grant Partners

- Five Washington State local CDR Teams
 - Benton-Franklin; Seattle-King; Kitsap; Tacoma-Pierce; & Spokane Counties
- Washington State Department of Health
- National MCH Center for Child Death Review
- Harborview Injury Prevention & Research Center
- Seattle Children's Hospital

Grant Activities

- Identification of injury prevention liaisons
- Technical assistance teleconferences
- Annual in-person conference days
- Professional development for selected team members
- Web-based resource for “best practices” in injury prevention

What We've Learned

- Strategies to promote effective injury prevention in the context of child death review
- Development and dissemination of resources for teams

Strategies to facilitate effective prevention in Child Death Review

Accountability

- Explicitly identify prevention as a goal
- To whom does your team report?
- How will your efforts be tracked?

Strategies to facilitate effective prevention in Child Death Review

Membership

- Expand beyond investigative focus
- Invite additional members for specific reviews
- Prevention Action Teams
 - Membership may overlap
 - Charged to act on recommendations from CDR

Strategies to facilitate effective prevention in Child Death Review

Expertise

- Identify an injury prevention “expert” on the team
- Develop local expertise through training
- Share expertise with other local teams
- Use web-based resources

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Strategies to facilitate effective prevention in Child Death Review

“Preventability”

- Minimize discussion of preventability
 - No death reviewed is now preventable
 - Most injury deaths could be prevented
- Arguments about preventability sometimes shift focus and are non-productive
 - May lead to failure to generate recommendation

Strategies to facilitate effective prevention in Child Death Review

Group Reviews by Mechanism

- Not every death needs a recommendation
- Patterns and priorities can be seen in grouped reviews
- Allow members to attend reviews when their expertise is most relevant

Strategies to facilitate effective prevention in Child Death Review

Facilitate Preparation by Members

- Share detailed information before the meeting
- Expect members to do some “homework”
- Make a phone call to a member whose input is likely to be especially useful – insure they show up prepared!

Strategies to facilitate effective prevention in Child Death Review

Press for Prevention-Related Data

- Request data from likely sources
- Invite representatives with access to important data to CDR meetings to see how data are used
- Note in reviews or minutes when important data are missing

Strategies to facilitate effective prevention in Child Death Review

Create Effective Recommendations

- Problem statement and context
- Prevention strategies recommended
 - Best Practices
 - Spectrum of Prevention
- Specific next steps
 - Who will take these steps?
 - To whom are recommendations addressed?
 - When will follow-up occur?

Strategies to facilitate effective prevention in Child Death Review

Create Effective Recommendations

- Use a template
 - Try to address all aspects
- Pay attention to follow-up
 - Keep meeting minutes in addition to structured data collection or reporting tools
 - Track "action items"

Strategies to facilitate effective prevention in Child Death Review

Cultivate a Media Relationship

- Illustrate the review process
- Provide data and prevention recommendations for specific injury mechanisms
- Highlight policies or programs developed as a result of CDR

Strategies to facilitate effective prevention in Child Death Review

Keep CDR visible in Your Agency

- Annual reports of activity
 - Membership & Meetings
 - Hours of time donated
 - Highlighted recommendations
 - Outcomes
- Presentations to health officer, child protective services, board of health or other sponsoring agency



Resources for CDR teams

- National MCH Center for Child Death Review
 - Model legislation
 - Policies / Protocols
 - <http://www.childdeathreview.org/>
- Online Decision Support Tool
 - Injury prevention focus

Online Decision Support Site

- Systematic review of prevention for 5 injury death mechanisms or intents
 - Drowning; Motor Vehicle Occupant; Firearms
 - Suicide; Interpersonal Violence
- Identified strategies likely to be considered or promoted by public health teams
- Rated strength of evidence supporting each intervention to identify best practices

Online Decision Support Site

- Real-time web interface during CDR session
- Teams sort evaluated interventions by mechanism, rating of effectiveness, population targeted or strategy employed.
- Interventions assessed as “promising” or “recommended” include resources for replication.

Example: Child Drowning

- 3 year old child pulled from neighbors' pool
- CDR team reviews strategies by age and evidence rating

BEST PRACTICES: Drowning

List of Potential Interventions

Rating: All Ratings
 Population: Young Children
 Strategy: All Strategies

Search Results

Overview

In the United States, 1,226 children (3-13) died from drowning in 2005. 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 left near the home or just outside of the home (not necessarily near the water) and had been out of sight of the supervisor for less than five minutes. Older children more often drown in open bodies of water (lakes, rivers, streams, ground pools).

Most children involved in about 33% to 50% of adolescent and adult deaths associated with water recreation. It is a major contributing factor in up to 50% of drownings among adolescent boys. Nearly three-quarters of boating-related deaths are due to drowning; 89% of people who drowned while boating were not wearing personal flotation devices.

[Click below to open the Drowning Logic Model.](#)

Common Resources

- [NIDDK's Boats, Bathubs, Aspects](#)
- [NIDDK's Cases of Potential Life Lost \(CPLE\) Reports](#)

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BEST PRACTICES: Drowning
Swimming Lessons

Description:
Although a number of studies have shown that swimming lessons improve a child's ability to swim, water safety, lifeline concepts, and floatation, no study has examined the most important question of whether swimming lessons reduce drownings among children aged 4 and under. While swimming lessons per se should not improve the risk of drowning, it is possible that completion of swimming lessons may lead to more confidence on the part of the child or increased supervision by the parent, which could lead to an increase in unsupervised water exposure. In addition, completion of swimming lessons may increase a child's confidence in their ability to swim, which could reduce the risk of unsupervised exposure and drowning.

Risk & Protective Factors Targeted:
Swimming skills instruction targets the risk of drowning by allowing children who have learned a body of water to move to a point of exit from the water or to obtain a surface flotation device.

Key Features:
Most swimming lessons for preschool-aged children focus on basic skills such as entering the water safely, becoming comfortable with floating in the water, simple techniques of breathing, and propelling oneself across short distances. Some water survival skills would be incorporated into structured swimming curricula but naturally are not.

Evaluation & Outcomes:
Some communities have organized operations, school-based swimming lessons in beachfronting locations for young children. We found no studies that assessed the effect of

Keywords:
Keywords: Young Children
Population: Young Children
Intervention: Water-Counseling
Measurement: Water-Safety Training for Research
Subpopulation: Individual Children

Additional Studies:
The updated search has not been conducted for this intervention.

Systemic Reviews:
[Bridgman, James, Patricia, Stewart](#)
[WORLDWIDE Cochrane Review of Individual Child and Child Care Swimmers](#)
[Anderson, Steve, Adams, John, Taylor](#)
[AUS, Green, 2004, Journal, Journal](#)
[Lifelines, 2004, Journal, Journal](#)

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“Unproven ...”

there is insufficient evidence available, to date, regarding the efficacy of this intervention. Promotion of this intervention should not divert time or resources from other, proven public health programs. Agencies choosing to implement this intervention should insure that a careful evaluation of the program is conducted and disseminated in order to deepen the base of available evidence.

BEST PRACTICES: Drowning

List of Potential Interventions

Rating:
Population:
Keywords:

Overview:
In the United States, 2,276 children (0-10) died from drowning in 2004. Males are at a much higher risk of drowning than girls, and studies 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 bathtub when left unattended, even for a few minutes. Toddler drowning most often occurs in swimming pools at 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, great ponds).

Medical care is provided to about 30% to 10% of drownings and adult deaths associated with water immersion. It is a major contributing factor to up to 10% of drownings among adolescents. About three-quarters of boating-related deaths are due to drowning. 10% of people who drown are child fatalities and some drownings are preventable.

Research Studies:
[Gibson, 2004, Journal](#)
[Business Department, Adult Supervision](#)
[Journal, Life, Journal, Journal](#)
[Paul, Martin, & John, Swimming Lessons](#)
[Prevention, Journal, Journal](#)

Evaluation & Outcomes

Kyrasiou used a case-control design to study 166 children age 0-14 yrs who suffered a submersion event. Children who survived with a good neurological outcome were nearly five times more likely to have received immediate bystander CPR than were those who died or survived with poor neurological function. The study could not judge the necessity or the quality of administered CPR. However, it suggests that immediate resuscitation before the arrival of paramedical personnel is associated with a significantly better neurological outcome in children with submersion injury.

We found no studies that looked at community-wide promotion of CPR knowledge as a drowning strategy.

Would This Intervention Be Appropriate in Our Community?

Generic

- What proportion of community members have received training in CPR?
 - What proportion of parents?
 - What proportion of high school students?
 - What proportion of boaters?
 - What proportion of private pool owners?
- Among those with training, what proportion has had a course in the last two years?
- Does your community have an identified local resource for CPR training?
- What does CPR training cost in your community?

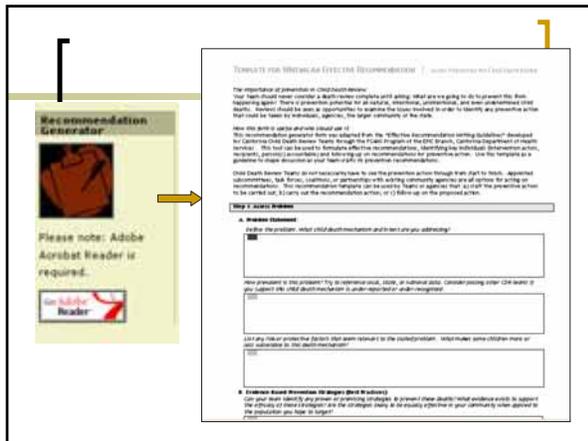
Incident Specific

- Was CPR administered prior to arrival of paramedic staff?
 - Who administered CPR?
 - What training in CPR had this person received?
 - Were any references or telephone assistance used to guide CPR performance?
 - If CPR was stopped, what was the reason?
- If CPR was not applied, why not?
- Was anyone present who had received training in CPR?

Additional Information & Ideas

[American Heart Association](#)
Provides "Community CPR Training: Tools to Help Get Your Program Started" guide and CPR Anytime program training.

[American Red Cross](#)
Information on Red Cross training programs, including Community First Aid, and Infant and Child CPR.



CDR Teams' Experience with the Decision Support Site

- Grant partner teams are using this resource
- Feedback
 - Generally positive
 - Add more injury mechanisms
 - Develop linkage to other programs running during review sessions

Disseminating Decision Support Site

- Will be made available to other teams at the end of the grant
- Need to identify a "home" and sources for continued updating / expansion of topics
- Considering linkage to multi-state CDR data repository (through National MCH Center for Child Death Review)

Grant Evaluation

- Process measures
- Participating CDR teams: satisfaction, self-efficacy, organizational commitment
- Rated completeness and quality of injury prevention data and recommendations submitted to Washington state program
 - 5 intervention and 19 comparison teams
 - before / after data

Lessons Learned

- CDR can be a venue for injury prevention
- Most teams encounter barriers in structure, function or resources that limit effective injury prevention activity
- CDR teams have a variety of reproducible strategies for overcoming these barriers
- Strategies and resources should be shared widely to promote the full value of CDR



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**The Child Death Review
Case Reporting System**

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National Center for Child Death Review Policy and Practice

Purpose of CDR Case Reporting 

To systematically collect, analyze and report on:

- ★ Child, family, supervisor and perpetrator information
- ★ Investigation actions
- ★ Services needed, provided or referred
- ★ Risk factors by cause of death
- ★ Recommendations and actions taken to prevent deaths
- ★ Factors affecting the quality of your case review

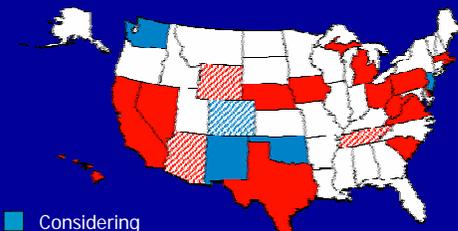
State of the States

- ★ 44 states had a case report tool
- ★ 39 states publish an annual report with findings and recommendations
 - ★ 18 states have legislation that requires a report on child death
- ★ However, there was no consistency among any state case report tools or state reports

A New Case Report System

- ★ Funded by Maternal and Child Health Bureau, HRSA, HHS
- ★ A 30 person workgroup of 18 states over two years, analyzed 32 existing state case report forms
 - ★ Developed standard data elements, data dictionary and 32 standardized reports

Using the National Center System



Benefits at the State/Local Level

- ★ Provides a mechanism for data collection to teams that lack a reporting system.
- ★ Collects information on risk factors that can be translated into prevention efforts.
- ★ System users can print standardized case reports on review data instantly.
- ★ States can easily report on CDR findings. De-identified data can be run for media campaigns, annual reports, specialized reports, local/state agencies and other organizations.

Strengths of Local/State Collaborations

- ★ If local/state teams collect the same data, their findings will have more of an impact at the national level. This system could lead to:
 - ★ Funding for areas identified by CDR teams
 - ★ Program funding for state CDR
 - ★ Legislative support
 - ★ Further collaboration with state and national child health, safety and protection organizations



Are CDR programs leading to change?

- 39 states publish an annual report with findings and recommendations.
- 33 states report that their reviews had direct impact on state legislation and policy changes.
- 32 states report that their reviews led to child death prevention programs.





Contact Us at:

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Web Page:

www.childdeathreview.org

Questions and Answers

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Visit <http://www.mchcom.com> for an archive of this event.
