



## **A WINDOW INTO PREVENTION**

*An initial report on preventing child  
death and injury in Wisconsin*

**2010**



**KEEPING  
KIDS ALIVE**  
IN WISCONSIN

★ Children's Health  
Alliance of Wisconsin

# ***A window into prevention - 2010***

***An initial report on preventing child death and injury in Wisconsin***

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## **Report contributors**

Abby Collier, MS

Child Death Review Project Manager, Children's Health Alliance of Wisconsin

Timothy E. Corden, MD

Associate Professor of Pediatrics, Medical College of Wisconsin

Associate Director of the Pediatric Critical Care Unit at Children's Hospital of Wisconsin

Co-director of the Policy Core, Injury Research Center, Medical College of Wisconsin

Brianna Kopp, MPH

Injury Surveillance Coordinator, Wisconsin Department of Health Services

Karen Ordinans

Executive Director, Children's Health Alliance of Wisconsin

Amy Schlotthauer, MPH

Evaluation Specialist, Injury Research Center, Medical College of Wisconsin

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## Purpose of the report

The purpose of this preliminary report is to demonstrate the importance of capturing risk factors and circumstances associated with a child's death beyond what is recorded on a death certificate. Current data reporting through death certificates only track the number of child deaths and causes. Child Death Review (CDR) teams utilize the National Center for Child Death Review Case Reporting System (Case Reporting System) to capture the who, what, when, where, why and how a child's death occurred. CDR teams use these factors to identify trends and drive prevention efforts in the community.

# Overview of child death review teams

**The purpose of a child death review (CDR) team is to prevent future deaths.** CDR teams formulate a complete picture of the risk factors and circumstances surrounding a child's death and use the information to prevent future deaths and injuries.

The state's CDR program consists of the Wisconsin Child Death Review Council (Council) and local CDR teams. The Council provides guidance to local teams; advises the legislature and state agencies on the need for modifications to law, policy and practice; educates the public; and identifies training needs. Local teams are based in individual or multiple counties.

The Wisconsin CDR guidebook, *Keeping Kids Alive in Wisconsin: Child Death Review Team Guidelines*, serves as a template for local teams and is available electronically at <http://www.chawisconsin.org/cdr.htm>.

The death of a child should invoke a community response. The circumstances involved in most child deaths are complex, and responsibility should not rest in any one place. Therefore, CDR team membership is multidisciplinary and includes:

- County medical examiner or coroner's office.
- Local law enforcement.
- Child protective services.
- District attorney's office.
- Local public health department.
- A pediatrician or health care provider with expertise in pediatrics and child development.
- Emergency medical services.
- A community hospital.
- Community mental health.
- Juvenile division of probate or family court.
- School district or local schools.
- Others as necessary (e.g., OB/GYN, neonatologist, hospital pathologist).

It is recommended that teams review all deaths including medical or expected occurring between birth and age 18. Several teams choose to broaden their review through age 21.

Although CDR teams examine each death for preventability, it is not the team's responsibility to implement recommendations. **Reviews are intended to catalyze community action.** Teams help facilitate prevention recommendations, such as:

1. Press releases to media on relevant topics (e.g., safe sleep, Safe Haven law, water safety).
2. Media interviews to provide factual information for parents and caregivers.
3. Coordination with the Department of Transportation (DOT) to re-grade and lower the speed limit in dangerous intersections.
4. Collaboration with local fire departments to standardize fire prevention messages.
5. Recommend legislation requiring bicycle helmets.

# Overview of report

## Data collection

The National Center for Child Death Review Case Reporting System (Case Reporting System) and death certificate data from Wisconsin Interactive Statistics on Health (WISH) system were used for this report. **Currently, 12 of Wisconsin's 72 counties enter case information into the Case Reporting System, and therefore, reflect only a portion of Wisconsin's child deaths from 2007-2008.**

The tables in this report are arranged to show Case Reporting System data in comparison to total child deaths recorded in WISH. The CDR risk factor tables demonstrate how the work of CDR teams build upon the information gathered on death certificates, allowing for a greater understanding of child deaths and direction for providing prevention.

The goal is to have all child deaths from all 72 Wisconsin counties captured in the Case Reporting System in addition to the official death certificate.

## National Center for Child Death Review Case Reporting System (Case Reporting System)

The Case Reporting System is a Web-based reporting system managed by the National Center for Child Death Review. The data system was developed by a workgroup of 26 public health and injury specialists representing 18 states and the Maternal and Child Health Bureau of the United States Health Resources and Services Administration. It is available to all states electronically or via paper form and collects specific information related to the circumstances of each death. For example, in the case of a motor vehicle crash, the child's location within the car, restraint use, driving conditions and other factors are all captured.

It is the responsibility of the CDR team to enter case information into the Case Reporting System for each child death reviewed. Reports can be generated by local CDR teams.

Additional information, including the data form fields, can be found at <http://www.cdrdata.org>.

## **Death certificate data available from Wisconsin Interactive Statistics on Health (WISH)**

WISH allows policymakers, health professionals and the public to query a Web-based data set to answer specific questions. Data are available on birth counts, low birth weight, teen births, prenatal care, fertility, infant mortality, general population mortality, injury mortality, injury hospitalizations, injury emergency department visits, the behavioral risk factors surveillance survey and violent death. To access WISH, visit <http://dhs.wisconsin.gov/wish/>. For this report, modules on infant mortality and all age mortality were used to determine the absolute number of deaths for ages 0 to 17 in Wisconsin during 2007-2008. These mortality modules are comprised of information generated by death certificates and represent the total number of deaths to persons in Wisconsin.

This report reflects the leading causes of death for children in Wisconsin. In addition, due to the preliminary nature of this report, causes were selected that are highly preventable or represent emerging public health issues.

### **Data limitations**

Data for all child deaths in Wisconsin are provided to give the reader a frame of reference when examining CDR Case Reporting System data that only represents 12 Wisconsin counties. The CDR data are a subset of the total number of child deaths from 2007-2008 and should be interpreted as such.

### **Report format**

Local CDR teams began utilizing the Case Reporting System in June 2008. Table 1 reflects the subset of child death cases entered into the Case Reporting System for 2007-2008 compared to the official death certificate for the same time period. Frequency tables show CDR Case Reporting System data along with data from the official death certificate. Risk factor tables are based on data from the Case Reporting System.

**Table 1. Wisconsin, per county: Child deaths, based on CDR cases and death certificates, 2007-2008.**

County	Number of cases entered into CDR	Death certificates	Percent of cases entered
Brown	36	64	56%
Clark	4	14	29%
Dodge	17	21	81%
Door	2	5	40%
Fond du Lac	13	20	65%
Kenosha	41	52	79%
Marathon	29	43	67%
Milwaukee	327	381	86%
Oconto	3	4	75%
Outagamie	7	35	20%
Racine	23	69	33%
Rock	12	50	24%
<b>Subtotal</b>	<b>514</b>	<b>758</b>	<b>68%</b>
Other counties	0	798	-
Total	514	1556	33%

The demographics and cause of death summary provide an overview of child death in Wisconsin documenting death certificate data and cases captured in the CDR Case Reporting System for 2007-2008. The remainder of the report focuses on the following leading causes of death:

- Motor vehicle and other transport crashes.
- Asphyxia.
- Sudden infant death syndrome.
- Homicide.
- Drowning.
- Poisoning.

For each of these causes of death, information from death certificates is provided along with Case Reporting System data. Following the data tables, a paragraph summary of the data is provided along with a list of risk factors derived from the data for each cause of death. The prevention section outlines potential actions to reduce the population incidence of the specific child death. When possible, the prevention recommendations are from the “Child Injury Prevention Tool Selecting Best Practices” online prevention generator <http://childinjuryprevention.org/main.html>, part of the National Center for Child Death Review. Harborview Injury Research Center, the original creator of this prevention tool, ranks prevention options into the following categories based on evidence supporting the strategy:

- Recommended – sufficient evidence, likely to prevent injuries and death.
- Promising – some evidence or expert opinion indicating the strategy is likely to reduce risk of injury and death.
- Unproven – insufficient evidence to recommend.
- Ineffective – evidence indicates intervention will not reduce risks for injury and death.
- Harmful – evidence that intervention could have harmful effects.<sup>1</sup>

# Key findings and insights

**More than one-quarter of all Wisconsin child deaths from 2007-2008 were due to a preventable cause.**

## Motor vehicle and other transport crashes

- Motor vehicle crashes continue to be the primary cause of injury deaths in Wisconsin, with the teenage population most affected.
- Wisconsin has the opportunity to strengthen Graduated Driver License (GDL) legislation to conform to current best-practices as a mechanism of reducing teenage driving deaths and injuries. Evidence also indicates parental involvement with teens regarding GDL can help reduce motor vehicle crashes; a potential community level action.
- CDR findings support the state's recent strengthening of restraint and distraction laws.

## Asphyxia

- Unsafe sleep environments including bed sharing, objects in the environment that potentially cause suffocation, and not placing the child on their back when put to sleep were common risk factors noted in asphyxia-related deaths. Public education, culturally sensitive encouragement of infant safe sleep environments and continued emphasis of the back to sleep message could reduce asphyxia-related deaths.

## Sudden infant death syndrome (SIDS)

- Premature gestation and maternal and secondhand smoke remain risk factors for SIDS. CDR data support the broader call to sustain and expand programs aimed at reducing tobacco use and premature births. The spectrum of prevention for these objectives is large, as efforts in these areas can improve the population's health beyond unintentional suffocation and SIDS deaths.

## Homicide (child abuse)

- Incident rates peak in children ages 0 to 4 and again for teenagers. CDR indicates the child's home is a common place for the event, and the perpetrator is often a relative.
- Visiting nurse programs targeting low-income, single, young parents are proven to reduce neglect and abuse.
- Consideration should be given to mandating in-hospital parent education regarding abusive head trauma after the birth of a child prior to discharge.

## **Drowning**

- Legislation requiring appropriate residential and municipal pool barriers is strongly supported by evidence.

## **Poisoning**

- CDR data indicate that prescription drug diversion of opioids is a problem worthy of further study and prevention efforts.

# Demographics

Death certificates and CDR offer comparable demographic information on child death. This section provides the demographic breakdown of all deaths in Wisconsin and the subset included in the Case Reporting System.

**Table 2. Wisconsin child deaths, based on death certificates and CDR cases by age, 2007-2008.**

Age*	Total deaths n (%)	Deaths in CDR n (row %)
Birth-27 days	621 (40%)	105 (16.9%)
28 days-364 days	349 (22.4%)	178 (51%)
1-4 years	150 (9.6%)	77 (51.3%)
5-9 years	108 (6.9%)	41 (38%)
10-14 years	108 (6.9%)	40 (37%)
15-17 years	220 (14.1%)	71 (32.3%)
Total	1556	512 (33%)

\*2 children had unknown age in CDR.

**Table 3. Wisconsin child deaths, based on death certificates by sex, 2007-2008.**

Sex	Total deaths n (%)	Deaths in CDR n (row %)
Male	904 (58.1%)	291 (32.2%)
Female	651 (41.8%)	222 (34.1%)
Unknown	1 (0.1%)	1 (100%)
Total	1556	514 (33%)

**Table 4. Wisconsin child deaths, based on death certificates by race and ethnicity, 2007-2008.**

Race	Total deaths n (%)	Deaths in CDR n (row %)
White	1168 (75.1%)	309 (26.5%)
Black	303 (19.5%)	151 (49.8%)
Asian	52 (3.3%)	23 (44.2%)
American Indian	33 (2.1%)	4 (12.1%)
Total	1556	488* (31.4%)
Ethnicity	Total deaths n (%)	Deaths in CDR n (row %)
Hispanic	146 (9.4%)	71 (48.6%)
Non-Hispanic	1410 (90.6%)	443 (31.4%)
Total	1556	514 (33%)

\*27 Children had unknown race in CDR.

## Death certificate data

During the time period covered by this report (2007-2008), 1,556 children ages 0 to 17 died in Wisconsin. Males comprise more than half of all child deaths (n=904, 58.1%) (Table 3). Almost two-thirds of children who died were less than one year of age (n=970, 62.3%) (Table 2). An additional 14.1% were ages 15 to 17. The racial background of deceased children was primarily white (n=1168, 75.1%) followed by black (n=303, 19.5%) (Table 4). Children of Hispanic ethnicity totaled 9.4% of all deaths (n=146, 9.4%) (Table 4).

## Case Reporting System data

One-third (n=514, 33.3%) of total deaths in Wisconsin during 2007-2008 are entered into the Case Reporting System. Data representing one-third of the male (n=291, 32.2%) and female (n=222, 34.1%) children who died are in the Case Reporting System (Table 3). Over half the deaths to children ages 28 days to 4 years are in the Case Reporting System, while only 16.9% of deaths to infants ages 0 to 27 days are entered (Table 2). One-third of the remaining age groups are entered (Table 2). Almost half of the black (49.8%), Asian (44.2%) and Hispanic (48.6%) deaths are entered into the Case Reporting System, while 26.5% of white and 12.1% of American Indian deaths are entered (Table 4).

## Cause of death summary

When entering data into the Case Reporting System, users are prompted to enter manner and cause of death information as recorded on the death certificate. Therefore, information from death certificates and the Case Reporting System is comparable. This section describes the breakdown of child death by manner (Table 5) and official cause of death (Table 6). Table 7 provides additional information on manner of death by injury cause for those cases in CDR. For definitions of cause and manner, visit the CDR data dictionary at <https://www.cdrdata.org/forms/DataDictionary.pdf>.

**Table 5. Wisconsin, official manner of child death, based on death certificates and CDR cases, 2007-2008.**

Official manner of child death	Total deaths n (%)	Deaths in CDR n (row %)
Natural	1048 (68.1%)	299 (28.5%)
Accident	308 (20%)	99 (32.1%)
Homicide	63 (4.1%)	41 (65.1%)
Suicide	31 (2%)	8 (25.8%)
Undetermined	89 (5.8%)	65 (73%)
Total*	1539	512 (33.3%)

\*2 cases in CDR are listed as unknown and 17 cases in WISH are pending and therefore not included in the totals listed.

**Table 6. Wisconsin, official cause of child death, based on death certificates and CDR cases, 2007-2008.**

Official cause of child death	Total deaths n (%)	Deaths in CDR n (row %)
Medical condition	1048 (68.1%)	362 (34.5%)
External cause of injury	402 (26.1%)	148 (36.8%)
Undetermined	89 (5.7%)	3 (3.4%)
Total*	1539	513 (33.3%)

\*1 case in CDR is listed as unknown and 17 cases in WISH are pending and therefore not included in the totals listed.

Table 7. Wisconsin, manner of child death by injury cause, CDR cases, 2007-2008.

Official manner of death from the death certificate	Injury cause									
	Motor vehicle and other transport	Fire, burn or electrocution	Drowning	Suffocation or strangulation	Weapon, including body part	Fall or crush	Poisoning	Exposure	Other	Unknown
Natural	0	0	0	0	0	0	0	0	0	0
Accident	37	5	11	28	2	5	5	1	1	0
Suicide	1	0	0	6	1	0	0	0	0	0
Homicide	0	0	2	3	28	0	2	0	2	1
Undetermined	0	0	0	3	1	0	3	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
Total	38	5	13	40	32	5	10	1	3	1

## Death certificate data

Each death certificate provides a manner of death classification. This classification also is recorded in CDR. Natural causes of death are the leading mortalities for children in the state (n=1048, 68.1%). Of these cases, 28.5% were entered into CDR (Table 5).

## CDR Case Reporting System data

There is variability in the proportion of deaths entered into the Case Reporting System by manner of death. Almost two-thirds of homicide deaths are entered into the system followed by accidents (32.1% entered), natural (28.5% entered) and suicides (25.8% entered) (Table 5). Approximately one-third of medical condition causes (34.5%) and external cause of injury (36.8%) cases are entered into the Case Reporting System (Table 6). Table 7 depicts the injury cause by manner of death for those cases in the Case Reporting System classified as external cause of injury (n=148). This table will be referred to within each cause of death section.

## MOTOR VEHICLE AND OTHER TRANSPORT CRASHES



### Background

Motor vehicle and other transport deaths are defined as a death resulting from a crash involving motor vehicles and transport vessels whether on public or non-public roads. Nationally, there were 4,268 fatal crashes involving children.<sup>2</sup>

### Risk factor

For cases reviewed by CDR teams, lack of passenger restraint use remains a risk factor for motor vehicle deaths.

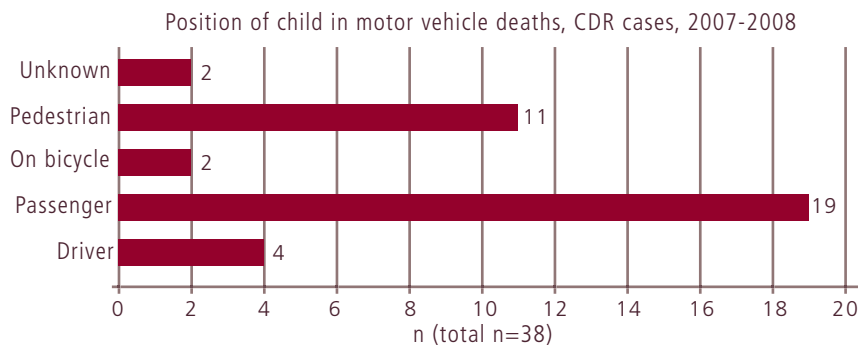
**Table 8. Motor vehicle and other transport deaths by age, race, ethnicity and sex, Wisconsin 2007-2008, based on death certificates and CDR cases.**

Age	Total deaths n (%)	Deaths in CDR n (row %)
<1	7 (4.7%)	2 (28.6%)
1-4 years	14 (9.4%)	5 (35.7%)
5-9 years	23 (15.4%)	8 (34.8%)
10-14 years	20 (13.4%)	5 (25%)
15-17 years	85 (57%)	18 (21.2%)
Total	149	38 (25.5%)
Race	Total deaths n (%)	Deaths in CDR n (row %)
White	133 (89.3%)	21 (15.8%)
Black**	10 (6.7%)	11 (110%)
Asian	5 (3.4%)	4 (80%)
American Indian	1 (0.7%)	1 (100%)
Total*	149	37 (24.8%)
Ethnicity	Total deaths n (%)	Deaths in CDR n (row %)
Hispanic	10 (6.7%)	3 (30%)
Non-Hispanic	139 (93.3%)	34 (24.5%)
Total*	149	37 (24.8%)
Sex	Total deaths n (%)	Deaths in CDR n (row %)
Male	94 (63.1%)	25 (26.6%)
Female	55 (36.9%)	13 (23.6%)
Total	149	38 (25.5%)

\*1 case in CDR was unknown race and ethnicity, and therefore is not reflected in the total.

\*\*1 of the 11 cases present in the CDR system occurred to a non-Wisconsin resident, whereas WISH only contains information on Wisconsin residents who die in Wisconsin.

**Figure 1. Position of child in motor vehicle and other transport deaths, 2007-2008 Wisconsin, CDR cases.**



**Table 9. Risk factors involved in motor vehicle deaths, CDR cases, 2007-2008.**

Risk factors*	Number of cases**	Percentage of total
Speeding over limit	14	36.8%
Recklessness	12	31.6%
Drug or alcohol use	9	23.7%
Unsafe speed for conditions	4	10.5%
Ran stop sign/red light	3	7.9%
Driver distraction	3	7.9%
Poor weather	3	7.9%
Poor visibility	3	7.9%
Other	3	7.9%
Driver inexperience	2	5.3%
Rollover	2	5.3%
Medical event (epileptic seizure)	1	2.6%
Poor sight line	1	2.6%
Cell phone use while driving	1	2.6%

\*For description of risk factors, please see CDR data dictionary available at <https://www.cdrdata.org/forms/DataDictionary.pdf>.

\*\*More than one reason may be cited; will not total 100%.

**Table 10. Proper restraint use by age in motor vehicle deaths, CDR cases, 2007-2008.**

Age group	Total deaths (in cars, trucks, vans and SUVs)	Restraints in proper use	Percentage properly restrained
<1	2	0	0%
1-4 years	1	0	0%
5-9 years	1	1	100%
10-14 years	2	1	50%
15-17 years	12	7	58.3%

Protective measures are defined as steps taken by child or supervisor to ensure child's safety in the event of a crash. The CDR team and person entering data assess proper restraint use based on Wisconsin state laws and information available regarding the incident. For more information, please see the CDR data dictionary available at <https://www.cdrdata.org/forms/DataDictionary.pdf>.

### Death certificate data

- 149 Wisconsin children died in motor vehicle and other transport crashes in 2007-2008 (Table 8). 38% of these deaths occurred in Southeastern Wisconsin.
- 57% (n=85) of these deaths occurred in teens ages 15 to 17, 89% (n=133) were white and 63% (n=94) male (Table 8).

### Case Reporting System data

- CDR teams reviewed a total of 38 child deaths due to motor vehicle and other transport vehicle crashes occurring in 2007-2008. This represents about one-quarter (25.5%) of the total motor vehicle and other transport deaths (Table 8).
- In half of the reviewed deaths (n=19), the child was a passenger in the vehicle (Figure 1).
- Pedestrian victims also were noted to represent a high percentage of the CDR cases (Figure 1).
- Of the CDR cases, only 50% of the children involved were properly restrained during the time of crash (Table 10).
- Other frequent risk factors noted: speeding over limit (36.8%), reckless driving (31.6%) and drug or alcohol use (23.7%) (Table 9).

### Risk factors

Risk factors derived from death certificates and available CDR case data:

- Teenage group.

- Male gender.
- Not using restraints (e.g., seatbelts, car seats).
- Speeding.
- Reckless driving.
- Drug or alcohol use.

## Prevention

Interventions listed below are directly from the “Child Injury Prevention Tool Selecting Best Practices” online prevention generator unless otherwise indicated (\*). Details and resources can be found at <http://childinjuryprevention.org/main.html>.

### Teenage driving

Recommended

- Passage of Graduated Driver Licensing Laws (GDL) to include the following evidence-based components.<sup>3,4</sup>
  - Minimum age of 16 years to obtain learner’s permit.
  - Minimum of 6-month holding period after obtaining a learner’s permit before applying for intermediate phase.
  - Minimum 30 hours of supervised driving.
  - Minimum age of 16.5 years for entering intermediate phase.
  - No unsupervised driving at night after 10:00 p.m.
  - No unsupervised driving with more than one peer younger than age 20.
  - Minimum age of 17 years for full licensing.

Promising

- Minimum legal driving age.
- Parental education/involvement to improve effectiveness of GDL.

### Restraint use

Recommended

- Clinical counseling to increase child restraint use.
- Community promotion to increase child restraint use.
- School-based education to increase child restraint use.
- Legislation to increase child restraint use.
- Enforcement of existing child restraint laws.
- Primary seatbelt law and enforcement.

Promising

- Education and giveaway programs to enhance booster seat use.

### **Speeding**

Recommended

- Traffic calming for speed reduction.
- Enforcement cameras for speed reduction.

### **Reckless driving**

Promising

- Centerline rumble strips.
- General education for licensed drivers.
- Minimum legal driving age.
- Red light cameras.

Other

- \*Legislation limiting or banning cell phone conversation and/or texting.<sup>5,6</sup>
  - Evidence regarding the effect of legislation is currently unavailable, although evidence regarding increased risk of motor vehicle crashes due to distraction from cell phone conversation or texting appears strong.

### **Drug and alcohol involvement**

Recommended

- Alcohol ignition interlocks.
- Blood alcohol concentration laws.
- Community-based education to reduce drunk driving.
- License revocation and restrictions to reduce drunk driving.
- Minimum legal drinking age.
- Sobriety check points and compulsory breath tests.
- Zero tolerance laws for youths to reduce drunk driving.

Promising

- Education of those serving alcohol and penalties to reduce drunk driving.

## ASPHYXIA



### Background

Asphyxia is defined as a lack of oxygen accompanied by an abundance of carbon dioxide. Events in the asphyxia category include suffocation, strangulation, choking or being confined in airtight places. Nationally, there were 1,817 suffocation incidents.<sup>7</sup>

### Risk factor

For cases reviewed by CDR teams, infant bed sharing with an adult or other children was a common risk factor for infant sleep-related suffocation and SIDS deaths.

**Table 11. Asphyxia deaths by age, race, ethnicity and sex, 2007-2008 Wisconsin, based on death certificates and CDR cases.**

<b>Age</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
<1	53 (62.4%)	26 (49.1%)
1-4 years	10 (11.8%)	6 (60%)
5-9 years	1 (1.2%)	1 (100%)
10-14 years	10 (11.8%)	4 (40%)
15-17 years	11 (12.9%)	3 (27.3%)
Total	85	40 (47.1%)
<b>Race</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
White	66 (77.6%)	24 (36.4%)
Black	16 (18.8%)	13 (81.3%)
Asian	2 (2.4%)	1 (50%)
American Indian	1 (1.2%)	0 (0%)
Total*	85	39 (45.9%)
<b>Ethnicity</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Hispanic	5 (5.9%)	5 (100%)
Non-Hispanic	80 (94.1%)	35 (43.8%)
Total	85	40 (47.1%)
<b>Sex</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Male	58 (68.2%)	23 (39.7%)
Female	27 (31.8%)	17 (63%)
Total	85	40 (47.1%)

\*1 CDR case had unknown race and therefore is not reflected in the total.

**Table 12. Type of event causing asphyxia, CDR cases, 2007-2008.**

Action causing asphyxia - Type of event	Frequency	Percentage
Suffocation	29	72.5%
Strangulation	9	22.5%
Choking	2	5%

**Table 13. Sleep-related asphyxia deaths, infants (younger than age 1) (n=25), CDR cases, 2007-2008.**

	Frequency	Percentage
<b>Incident sleep location</b>		
Crib	2	8%
Adult bed	14	56%
Couch	8	32%
Bassinet	1	4%
Chair	0	-
Floor	0	-
Other	0	-
Unknown/missing	0	-
<b>Position of child when put to sleep</b>		
On back	14	56%
On stomach	4	16%
On side	2	8%
Unknown	5	20%
<b>Position of child when found</b>		
On back	12	48%
On stomach	4	16%

On side	4	16%
Unknown	5	20%
<b>Child's usual sleep place</b>		
Crib	3	12%
Adult bed	2	8%
Couch	1	4%
Bassinet	2	8%
Chair	0	-
Floor	0	-
Other	0	-
Unknown/missing	12	48%
<b>Crib in home</b>	11	44%
<b>Objects in sleep environment*</b>		
Pillow	5	20%
Blankets	5	20%
Comforter	1	4%
Mattress	7	28%
Wall	3	12%
Couch	5	20%
Other**	4	16%
<b>Bed sharing</b>		
With adult only	16	64%
With children only	2	8%
With adults and children	2	8%

\*List is not mutually exclusive. Inclusion of an object in the sleep environment does not indicate it was involved in the child's death.

\*\*Includes animal, stuffed animal, bed frame and radiator.

## Death certificate data

- 85 Wisconsin children died due to asphyxia in 2007-2008 (Table 11).
- 62% (n=53) of these deaths occurred in infants younger than age 1; 78% (n=66) were white and 68% (n=58) were male (Table 11).

## Case Reporting System data

- CDR teams reviewed a total of 40 child deaths due to asphyxia occurring in 2007-2008. This represents 47.1% of the asphyxia deaths in the state (Table 11).
- The majority (70%) of the reviewed asphyxia deaths were unintentional in nature; 15% were suicide and 8% were homicide (Table 7).
- Suffocation was the action causing 72.5% of the reviewed asphyxia deaths, followed by strangulation (22.5%) and choking (5%) (Table 12).
- The majority of CDR suffocation deaths occurred in infants younger than age 1 while in a sleeping environment. (86%).
- The majority of infant CDR sleep-related asphyxia deaths occurred in an adult bed (56%). Bed sharing with adults and/or another child was a factor in 80% of CDR sleep-related asphyxia deaths (Table 13).
- Choking cases involved food (n=1) and a balloon (n=1).

## Risk factors

Risk factors derived from death certificates and available CDR case data:

- Infant age group (newborn to 1 year).
- Sleep-related suffocation.
  - Sleeping in a location other than a crib (adult bed, couch).
  - Lack of a crib in the home.
  - Lack of crib use when available.
  - Infant not placed on back to sleep.
  - Objects in the sleep environment.
  - Bed sharing with adults and/or children.
- Choking – food, unsafe objects (such as balloons), young age.
- Suicide noted as a prominent cause of death.

## Prevention

### Sleep-related suffocation<sup>8</sup>

Safe sleep recommendations for infants

- Place the baby's crib or bassinet within arm's reach of the adult bed. This makes it easier to breastfeed and bond.
- Place baby on their back to sleep during naps and at night.

- The crib or bassinet should be free of toys, soft bedding, blankets and pillows.
- The mattress in the crib should be firm and tight fitting.
- Provide an alcohol and smoke-free environment during pregnancy and once the baby is born.
- Use one-piece blanket sleepers instead of blankets to avoid suffocation.
- Ensure that all providers in the community are giving a consistent safe sleep message. This message should first be introduced during pregnancy and continue through the child's first year of life. The message should be simple and provide parents with guidelines for sleep, such as:

**Babies sleep best by following the ABCs:**

**A** **ALONE** **B** **on their BACK** **C** **in a CRIB**



ASPHYXIA

### Cribs for Kids<sup>9</sup>

Provides free or low cost cribs to parents without access to a safe sleep environment. Crib distribution is paired with one-on-one teaching and follow up to ensure proper and consistent use.

### Choking – food, unsafe objects<sup>10</sup>

The most common choking hazards are food, coins, balloons and other toys. Nationally, over 60% of choking deaths occur in children younger than age 3. This age group is vulnerable due to small airways. In addition, they are still developing abilities to chew and swallow food. Nationally, balloons account for almost 30% of choking deaths in children younger than age 6, and hot dogs are a leading cause of choking deaths for children young than age 10.

#### Public awareness

- Educate parents, teachers and child care personnel about the dangers of childhood choking and avoidance of high-risk objects.
  - High-risk objects include: small toys, latex balloons, coins, hard candy, whole grapes, peanuts/nuts, seeds, popcorn, chunks of peanut butter, marshmallows, chewing gum, sausages, carrot sticks and hot dogs.
  - Education provided to the above groups by the medical community.
- Federal and state hazardous labeling regulations.
  - Cooperation between Consumer Product Safety Commission, Federal Food and Drug Administration and U.S. Department of Agriculture.
  - Identify and require labeling of high-risk choking items, such as toys and foods (e.g., hot dogs).
  - Industry voluntary labeling of high-risk products.

### Suicide

Interventions listed below are directly from the “Child Injury Prevention Tool Selecting Best Practices” online prevention generator unless otherwise indicated (\*). Details and resources can be found at <http://childinjuryprevention.org/main.html>.

#### Recommended

- Assessment and referral training for health care providers to recognize at-risk youth, screening tools and initial suicidal management skills.
- Media guidelines for suicide reporting that reduces the risk of additional suicides.
- Skills training that encourages the development of problem solving, coping and cognitive skills in high-risk groups.

### Promising

- Gatekeeper training that includes community and school programs directed at training adults to recognize suicidal youth.
- Post-intervention and crisis intervention.
- School-based intervention to decrease imitation suicides.
- Restricting lethal means to decrease the availability of lethal agent during the impulsive risk period a suicidal person may experience (e.g., suicidal barriers on a bridge). Opportunity to seek assistance to change a person's intent.

## SUDDEN INFANT DEATH SYNDROME



### Background

SIDS is a medical cause of death and the leading cause of death for infants younger than age 1. Higher SIDS rates are found in African-American and American Indian/Alaska Native children. These rates are 2 to 3 times the national average.<sup>11</sup>

### Risk factor

For cases reviewed by CDR teams, the non-back to sleep position and bed sharing were identified as risk factors.

**Table 14. SIDS deaths by age, race, ethnicity and sex, 2007-2008 Wisconsin, based on death certificates and CDR cases.**

Age (months)	Total deaths n (%)	Deaths in CDR n (row %)
<1	15 (16.9%)	12 (80%)
1	15 (16.9%)	12 (80%)
2	12 (13.5%)	12 (100%)
3	22 (24.5%)	9 (40.9%)
4	13 (14.6%)	9 (69.2%)
5	5 (5.6%)	1 (20%)
6	4 (4.5%)	2 (50%)
7	2 (2.2%)	2 (100%)
8	-	-
9	1 (1.1%)	0 (0%)
10	-	-
11	-	-
Total	89	59 (66.3%)
Race	Total deaths n (%)	Deaths in CDR n (row %)
White	51 (57.3%)	22 (43.1%)
Black	35 (39.3%)	31 (88.6%)
Asian	-	-
American Indian	3 (3.4%)	1 (33.3%)
Unknown	-	5 (-)
Total	89	59 (66.3%)

Ethnicity	Total deaths n (%)	Deaths in CDR n (row %)
Hispanic*	6 (6.7%)	7 (116%)
Non-Hispanic	83 (93.3%)	52 (62.7%)
Total	89	59 (66.3%)
Sex	Total deaths n (%)	Deaths in CDR n (row %)
Male	52 (58.4%)	32 (61.5%)
Female	36 (40.4%)	27 (75%)
Total	89	59 (66.3%)

\*Classification of ethnicity may vary between death certificate and CDR.

**Table 15. Incident sleep location, SIDS deaths, 2007-2008 Wisconsin, CDR cases.**

	Frequency	Percentage
Crib	12	20.3%
Adult bed	31	52.5%
Couch	2	3.4%
Chair	2	3.4%
Floor	1	1.7%
Other	8	13.6%
Unknown	3	5.1%

**Table 16. Other risk factors for SIDS deaths, 2007-2008 Wisconsin, CDR cases.**

	Percentage of total (n=59)
Preterm (<37 weeks) birth	27.1%
Multiple birth	11.9%
Mother smoked	23.7%
Bed sharing with an adult or child	63.2%

**Table 17. Sleep-related SIDS deaths, sleep characteristics (n=57), CDR cases, 2007-2008\*.**

	Frequency	Percentage
<b>Incident sleep location</b>		
Crib	12	21.1%
Adult bed	31	54.4%
Couch	2	3.5%
Bassinet	0	-
Chair	2	3.5%
Floor	1	1.8%
Other	8	14%
Unknown/missing	1	1.8%
<b>Position of child when put to sleep</b>		
On back	36	63.2%
On stomach	7	12.3%
On side	4	7%
Unknown	10	17.5%
<b>Position of child when found</b>		
On back	30	52.6%
On stomach	13	22.8%
On side	7	12.3%
Unknown	7	12.3%
<b>Child's usual sleep place</b>		
Crib	15	26.3%
Adult bed	22	38.6%

Couch	1	1.8%
Bassinet	0	-
Chair	0	-
Floor	0	-
Other	4	7%
Unknown/missing	15	26.3%
<b>Crib in home</b>	31	54.4%
<b>Objects in sleep environment**</b>		
Pillow	8	14%
Blankets	12	21%
Comforter	0	-
Mattress	18	31.6%
Wall	0	-
Couch	0	-
Other***	4	7%
<b>Bed sharing</b>		
With adult only	18	31.5%
With children only	2	3.5%
With adults and children	16	28.1%

\* 2 SIDS cases did not occur in a sleep environment.

\*\* List is not mutually exclusive. Inclusion of an object in the sleep environment does not indicate it was involved in the child's death.

\*\*\* Includes animal, stuffed animal, bed frame and radiator.

### Death certificate data

- 89 Wisconsin children died due to SIDS in 2007-2008 (Table 14).
- 86.5% (n=77) of these deaths occurred in infants ages 0 to 4 months; 57.3% (n=51) were white, 39.3% (n=35) were black and 58.4% (n=52) were male (Table 14).

## Case Reporting System data

- CDR teams reviewed a total of 59 SIDS deaths for 2007-2008 (Table 14). This represents 20.8% of all infant deaths reviewed (n=283) by CDR Teams.
- Almost all (96.6%) SIDS deaths reviewed were sleep-related deaths.
- Over half (52.5%) of infant deaths reviewed were found sleeping in an adult bed (Table 15).
- 27.1% of infant deaths reviewed were born before 37 weeks gestation (Table 16).
- Almost one-quarter (23.7%) of mothers smoked during pregnancy in those infant deaths that were reviewed (Table 16).
- 63.1% of sleep-related SIDS deaths reviewed were bed sharing with an adult or child at the time of death (Table 17).

## Risk factors summary

Risk factors derived from death certificates and available CDR case data:

- Infants younger than age 4 months.
- Sleeping in an adult bed.
- Premature gestation.
- Maternal smoking during pregnancy.
- Bed sharing with adults and/or children.

## Prevention<sup>12</sup>

- Follow the safe sleep practices outlined in the previous section.
- **Offer a pacifier.** Sucking on a pacifier at nap time and bedtime may reduce the risk of SIDS. Note: if breastfeeding, wait to offer a pacifier until baby is one month old and settled into a comfortable nursing routine.
- **Moderate room temperature.** Keep the temperature in your baby's room at a level that's comfortable for you, not warmer than normal.
- **Premature birth.** Data support the concept of premature birth as a known risk factor for SIDS. Prevention programs aimed at reducing prematurity should have a positive effect on reducing SIDS.
- **Maternal and secondhand smoke.** Data support the concept of fetal and infant exposure to tobacco smoke as a known risk factor for SIDS. Prevention programs aimed at reducing tobacco use should have a positive effect on reducing SIDS.

## HOMICIDE



### Background

Homicide is the second leading cause of death for children and adults between ages 10 and 24. Firearms account for 84% of homicide victims in this age group. Males are 6.7% more likely than females to be victims of a homicide.<sup>13</sup>

### Risk factor

For cases reviewed by CDR teams, the child's home was the most common place for a homicide to occur.

**Table 18. Wisconsin homicide deaths by age, race, ethnicity and sex, based on death certificates and CDR cases, 2007-2008.**

<b>Age</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
<1	23 (36.5%)	13 (56.5%)
1-4 years	11 (17.5%)	10 (90.9%)
5-9 years	3 (4.8%)	1 (33.3%)
10-14 years	5 (7.9%)	3 (60%)
15-17 years	21 (33.3%)	14 (66.7%)
Total	63	41 (65.1%)
<b>Race</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
White	33 (52.4%)	15 (45.5%)
Black	28 (44.4%)	25 (89.3%)
Asian	1 (1.6%)	1 (100%)
American Indian	1 (1.6%)	0 (0%)
Total	63	41 (65.1%)
<b>Ethnicity</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Hispanic	12 (19%)	4 (33.3%)
Non-Hispanic	51 (81%)	37 (72.5%)
Total	63	41 (65.1%)
<b>Sex</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Male	44 (69.8%)	30 (68.2%)
Female	19 (30.2%)	11 (57.9%)
Total	63	41 (65.1%)

**Table 19. Wisconsin location of homicide incident, CDR cases, 2007-2008.**

	Percentage of total (n=41)
Home	68.3%
Relative's home	2.4%
Sidewalk/alley/roadway	26.8%
Other	2.4%

**Table 20. Wisconsin relation of perpetrator to child victim, homicides, CDR cases, 2007-2008.**

	Percentage of total (n=41)
Biological parent	22%
Other relative	2.4%
Acquaintance	4.9%
Child's boyfriend/girlfriend	2.4%
Rival gang member	4.9%
Stranger	12.2%
Other	4.9%
Unknown*	46.3%

\*CDR team unable to determine at the time of review.

**Table 21. Weapon type, homicides, CDR cases, 2007-2008.**

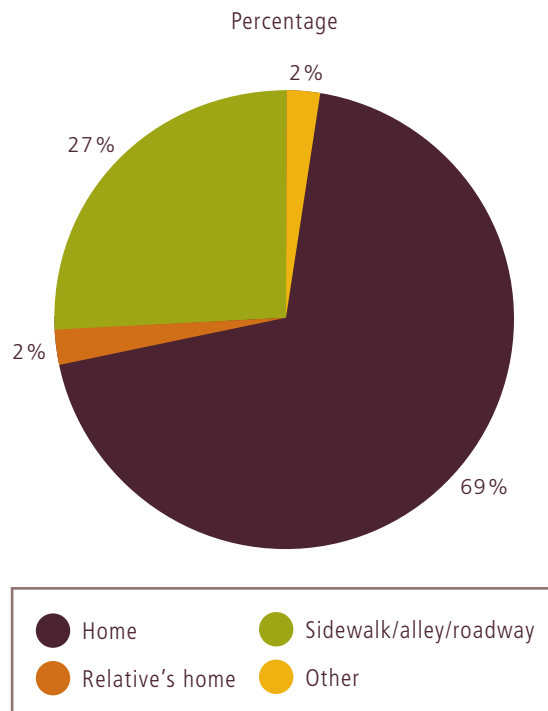
	Percentage of total (n=41)
Firearm	36.6%
Sharp instrument	7.3%
Blunt instrument	2.4%
Person's body part	22%
Missing	31.7%

**Table 21 (b). Homicides by age and weapon, CDR cases, 2007-2008.**

Age group	Firearm	Sharp instrument	Person's body part	Total
<1	-	-	7	7
1-4 years	1	-	2	4
5-9 years	-	-	-	-
10-14 years	2	1	-	3
15-17 years	12	2	-	14
Total*	15	3	9	28

\*13 cases had unknown marked for weapon and therefore are not reflected in this total.

**Figure 2. Wisconsin location of homicide incident, CDR cases, 2007-2008.**



**Death certificate data**

- 63 Wisconsin children died due to homicide in 2007-2008 (Table 18).
- Children younger than age 10 represented 58.8% of the homicides with over one-third (36.5%) occurring in infants younger than age 1. Children ages 10 to 17

represented 41.2% of the homicides with one-third (33.3%) occurring in teens ages 15 to 17 (Table 18).

- 52.4% (n=33) of the children who died were white, 44.4% (n=28) were black and 69.8% (n=44) were male (Table 18).

### Case Reporting System data

- CDR teams reviewed a total of 41 homicide deaths for 2007-2008. This represents 65.1% of all child homicides in Wisconsin during that time period (Table 18).
- Home was the most common place for the CDR reviewed cases (68.3%) (Table 19).
- The perpetrator was a relative in at least 24.4% of the CDR cases reviewed, and was a parent in 22% of the cases (Table 20).
- Over a third of homicides reviewed by CDR involved firearms (Table 21).

### Risk factors summary

Risk factors derived from death certificates and available CDR case data:

- Children of all ages are affected; increased incidence noted in infants younger than age 1 and teens.
- Access to weapons.
- Home is frequently the homicide environment.
- The perpetrator is often known to the victim and is often a blood relative.

### Prevention

Prevention measures listed focus on maltreatment causes of homicide or child abuse events. Wisconsin data are similar to national findings indicating the majority of child maltreatment victims are younger than age 6 with approximately half younger than age 1.<sup>14</sup>

Interventions listed below are directly from the “Child Injury Prevention Tool Selecting Best Practices” online prevention generator unless otherwise indicated (\*). Details and resources can be found at <http://childinjuryprevention.org/main.html>.

Recommended

- Nursing home visit programs to prevent child abuse and neglect.
  - Registered nurse as the provider.
  - Target low-income, single, young parents.
  - Consistent visiting promotes healthy relationships between providers and parents.

Promising

- Paraprofessional home visit programs to prevent child abuse and neglect.
- Clinical education to prevent shaken baby syndrome.

- Parent education about the risk of head trauma due to infant shaking.
- Clinical staff in health care settings including hospitals.
- Potential for legislative action requiring education during newborn and/or prenatal periods.
- Parent Child Interactive Training (PCIT).
  - Teaches high-risk parents skills to create a positive and supportive parent-child relationship.

## DROWNING<sup>15</sup>



### Background

Nationally, drowning remains a leading cause of death for children and young adults and was the second leading cause of death for children ages 1 to 4 living in the U.S. in 2007.<sup>16</sup>

### Risk factor

For cases reviewed by CDR teams, common risk factors for drowning included improper supervision and lack of barriers to water.

**Table 22. Wisconsin drowning deaths by age, race, ethnicity and sex, based on death certificates and CDR cases, 2007-2008.**

Age	Total deaths n (%)	Deaths in CDR n (row %)
<1	2 (6.9%)	2 (100%)
1-4 years	10 (34.5%)	5 (50%)
5-9 years	5 (17.2%)	2 (40%)
10-14 years	4 (13.8%)	1 (25%)
15-17 years	8 (27.6%)	3 (37.5%)
Total	29	13 (44.8%)
Race	Total deaths n (%)	Deaths in CDR n (row %)
White	17 (58.6%)	6 (35.3%)
Black	6 (20.7%)	4 (66.7%)
Asian	6 (20.7%)	1 (16.7%)
American Indian	-	-
Total*	29	11 (37.9%)
Ethnicity	Total deaths n (%)	Deaths in CDR n (row %)
Hispanic**	1 (3.4%)	3 (300%)
Non-Hispanic	28 (96.6%)	10 (35.7%)
Total	29	13 (44.8%)
Sex	Total deaths n (%)	Deaths in CDR n (row %)
Male	18 (62.1%)	8 (44.4%)
Female	11 (37.9%)	5 (45.5%)
Total	29	13 (44.8%)

\*2 Children in CDR had unknown marked for race and therefore are not reflected in this total.

\*\*1 of the 3 cases present in the CDR system occurred to a non-Wisconsin resident, whereas WISH only contains information on Wisconsin residents who die in Wisconsin. Additionally, Hispanic classification may vary between death certificate and CDR data.

**Table 23. Place of drowning and age, CDR cases, 2007-2008.**

Age	Lake/river/ pond/creek n (%)	Pool/spa/ hot tub n (%)	Bathtub n (%)	Total n (%)
<1	-	-	2 (100%)	2 (100%)
1-4 years	1 (20%)	2 (40%)	2 (40%)	5 (100%)
5-9 years	-	1 (50%)	1 (50%)	2 (100%)
10-14 years	1 (100%)	-	-	1 (100%)
15-17 years	3 (100%)	-	-	3 (100%)
Total	5 (38.5%)	3 (23.1%)	5 (38.5%)	13 (100%)

**Table 24. Factors involved in drowning deaths by place of drowning, 2007-2008 Wisconsin, CDR cases.**

Risk factors*	Lake/river/ pond/creek (n=5)	Pool/spa/ hot tub (n=3)	Bathtub (n=5)
Child wearing flotation device	-	-	-
Child could swim	3 (80%)	-	-
No barriers to water	3 (80%)	1 (33.3%)	-
Child not supervised, but needed	1 (20%)	-	1 (20%)
Supervisor impaired by alcohol/drugs	-	-	1 (20%)

\*More than one reason may be cited; will not total 100%. Percentage provided is reflective of the number of risk factors present in each drowning location. For description of risk factors, please see CDR data dictionary available at <https://www.cdrdata.org/forms/DataDictionary.pdf>.

## Death certificate data

- 29 Wisconsin children died due to drowning in 2007-2008 (Table 22).
- Over one-third (34.5%) of these deaths occurred in children ages 1 to 4 and another 27.6% (n=8) occurred in teens ages 15 to 17 (Table 22).
- 58.6% (n=17) of the child deaths were white, 20.7% (n=6) were black, 20.7% (n=6) were Asian and 62.1% (n=18) were male (Table 22).

## Case Reporting System data

- CDR teams reviewed a total of 13 drowning deaths for 2007-2008 (Table 22). This represents 44.8% of all child drowning deaths in Wisconsin during the time period (Table 22).
- 11 of the CDR drowning deaths reviewed were unintentional in nature. The remaining 2 were homicide by drowning (Table 7).
- For CDR cases, the most likely place to drown for children ages 0 to 4 was a bathtub, spa or pool (Table 23).
- For CDR cases, the most likely place for older children to drown was in a stream, lake or pond (Table 23).
- Lack of barriers to the water was a noted CDR risk factor for drowning occurring in a pool/hot tub/spa and in a lake/river/pond/creek (Table 24).
- Lack of supervision or an impaired supervisor was an additional noted CDR risk factor (Table 24).

## Risk factors summary

Risk factors derived from death certificates and available CDR case data:

- Age – drowning is a leading cause of death for children ages 1 to 4.
- Place of drowning is often influenced by the age of the victim. Younger children tend to drown in bathtubs, spas and pools and older children in lakes, rivers, ponds and/or creeks.
- Lack of barriers around water.
- Lack of child supervision or impaired supervision by alcohol/drugs.

## Prevention

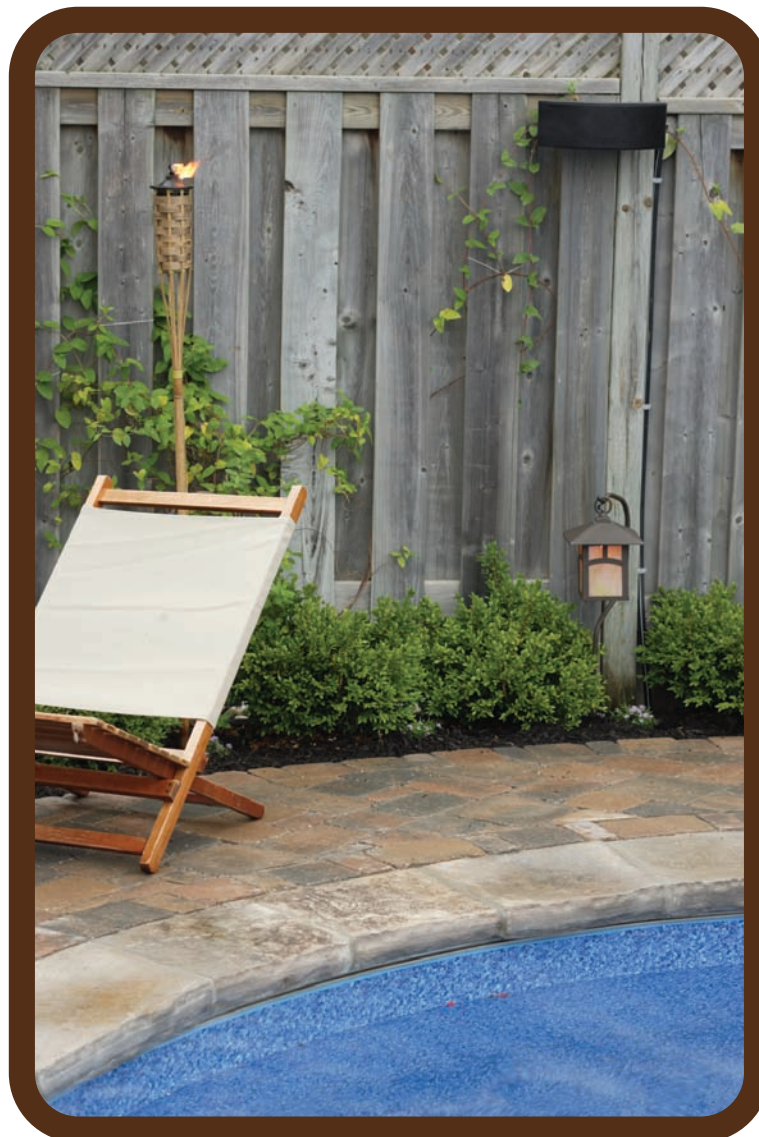
Interventions listed below are directly from the “Child Injury Prevention Tool Selecting Best Practices” online prevention generator unless otherwise indicated (\*). Details and resources can be found at <http://childinjuryprevention.org/main.html>.

Recommended

- Public awareness/education<sup>17</sup>
  - Supervision – as noted above, place matters. Infants and preschool children and those with special health care needs should have designated constant adult attendance while in a bathtub or swimming in a pool or other body of water.
    - Supervision without distraction. The supervising adult should be engaged in watching the children, and not distracted by activities, such as reading or talking on the phone. Many children who drown are only out of sight for a few minutes.
    - Supervision without impairment. Supervising adult should not have

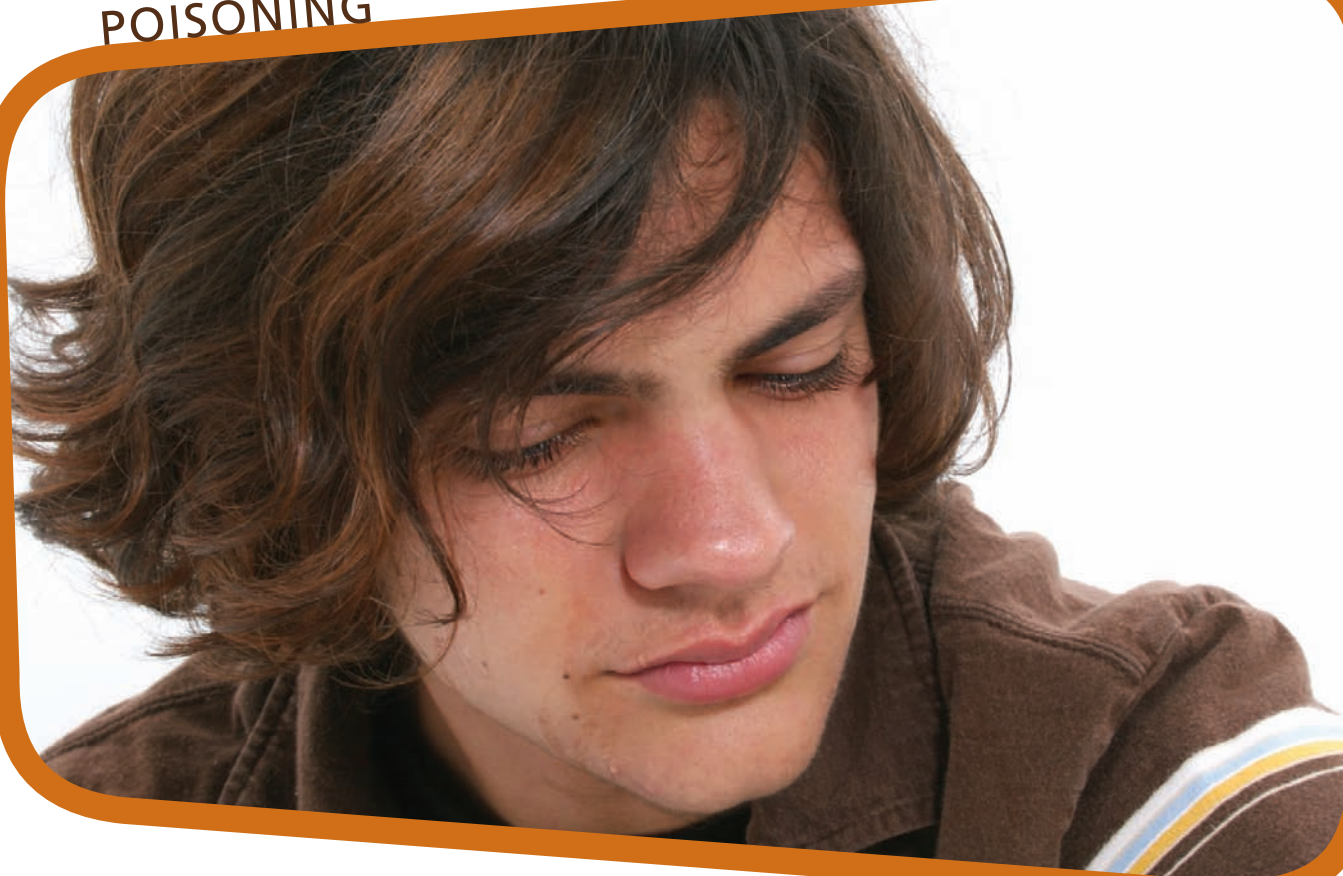
judgment impaired with alcohol or drug use.

- \*Water watchers program<sup>18</sup>
- Avoid alcohol before or during swimming, boating or other water activities, and while supervising children in the water.
- Teaching children how to swim does not keep them from drowning, but recent evidence suggests swimming instruction may reduce the chance of drowning even for young children ages 1 to 4.<sup>19,20</sup>
- While boating, use personal floatation devices that are U.S. Coast Guard approved.
- Pool fencing
  - Four-sided barrier with a self-closing and latching gate.
  - Minimum fence height.
  - Only prevents children without the developmental, physical and mental abilities to cross the barrier.



- Community and public policy
  - Promote cardiopulmonary resuscitation (CPR) and emergency medical services for children (EMSC) in the community because prompt resuscitation of a drowning victim at the scene greatly improves outcomes.
  - Personal flotation device legislation requiring the use of personal flotation devices while boating.
  - Pool enclosure legislation requiring the proper barrier around all pools, public and residential.

## POISONING



### Background

Unintentional poisoning is the second leading cause of unintentional injury death for children between ages 15 and 17.<sup>21</sup> Approximately 90% of poisonings occur in the home.<sup>22</sup>

### Risk factor

For cases reviewed by CDR teams, opioids including Methadone are common substances leading to poisoning deaths.

**Table 25. Wisconsin, poisoning deaths by age, race, ethnicity and sex, 2007-2008, death certificates and CDR cases.**

<b>Age</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
<1	2 (6.9%)	1 (50%)
1-4 years	3 (10.3%)	2 (66.7%)
5-9 years	2 (6.9%)	0 (0%)
10-14 years	8 (27.6%)	2 (25%)
15-17 years	14 (48.3%)	5 (35.7%)
Total	29	10 (34.5%)
<b>Race</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
White	24 (82.8%)	8 (33.3%)
Black	3 (10.3%)	2 (66.7%)
Asian	-	-
American Indian	2 (6.9%)	0 (0%)
Total	29	10 (34.5%)
<b>Ethnicity</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Hispanic	5 (17.2%)	2 (40%)
Non-Hispanic	24 (82.8%)	8 (33.3%)
Total	29	10 (34.5%)
<b>Sex</b>	<b>Total deaths n (%)</b>	<b>Deaths in CDR n (row %)</b>
Male	18 (62.1%)	5 (27.8%)
Female	11 (37.9%)	5 (45.5%)
Total	29	10 (34.5%)

**Table 26. Wisconsin type of poison by cause (intent) of death, CDR cases\*, 2007-2008.**

	Unintentional n (%)	Undetermined n (%)	Homicide n (%)
Antidepressant	1 (10%)	-	-
Opiate	2 (20%)	1 (10%)	-
Methadone	1 (10%)	1 (10%)	2 (20%)
Alcohol	1 (10%)	-	-
Carbon Monoxide	-	1 (10%)	-
Other drug**	1 (10%)	-	-

\*List not mutually exclusive; more than one drug may be present in each case.

\*\*This was specified in notes as a mix of vicodin, oxycontin and heroin. These are all opioids, but are not duplicated in the opiate category.

### Death certificate data

- 29 Wisconsin children died due to poisoning in 2007-2008 (Table 25).
- Almost half of these deaths (48.3%, n=14) occurred in teens ages 15 to 17 with another 27.6% occurring in children ages 10 to 14 (Table 25).
- 82.8% (n=24) of child deaths were white and 62.1% (n=18) were male (Table 25).

### Case Reporting System data

- CDR teams reviewed a total of 10 poisoning deaths for 2007-2008 (Table 24). This represents 34.5% of all child poisoning deaths in Wisconsin during that time period (Table 25).
- 5 of the CDR poisoning deaths reviewed were unintentional (Table 7).
- Methadone was the opioid found in at least 4 of the deaths including both homicides (Table 26).
- Unintentional deaths involved antidepressants, opiates, methadone and/or alcohol (Table 26).

### Risk factors summary

Risk factors derived from death certificates and available CDR case data:

- All age groups are affected, however, children ages 10 to 17 currently carry the

greatest burden.

- Predominance of male gender and white race.
- Cases of suicide and homicide identified.
- Both prescription and illegal drugs.
- Alcohol.

## Prevention

Nonmedical use of prescription drugs is a leading cause of poisoning overdose exposures for young children and adolescents through the older adult population.<sup>23</sup> Although strong evidence for specific prevention approaches is currently unavailable, the following options focus on educating the general public about keeping prescription drugs and toxins out of the reach of children and policies aimed at reducing the abundance of prescription drugs in a community. Opioids, a class of pain relieving agents, are the most commonly misused prescription drug. Community services for substance abuse treatment centers also are strongly encouraged.

- Comprehensive list of poisoning prevention tips can be found at <http://www.cdc.gov/HomeandRecreationalSafety/Poisoning/preventiontips.htm>.
- Limit access within the home<sup>24</sup>
  - Keep all drugs in childproof cabinets.
  - Be aware of any drugs guests may bring into the home (including grandparents and other relatives); these drugs also must be safely stored.
  - Properly dispose of unused, unneeded and expired prescription drugs [http://www.whitehousedrugpolicy.gov/publications/pdf/prescrip\\_disposal.pdf](http://www.whitehousedrugpolicy.gov/publications/pdf/prescrip_disposal.pdf).
  - Monitor prescribed medication usage for children and teenagers.
- Limit access within the community
  - Information can be found at <http://www.cdc.gov/HomeandRecreationalSafety/Poisoning/brief.htm>.
  - Encourage health care providers to limit opioid use and quantity prescribed when possible, and to consider alternative pain relief treatments.
  - Establish a state prescription drug monitoring program.
  - National Take Back Day<sup>25</sup>
    - Community event to collect and properly dispose of expired and unused prescription drugs.
- Suicide prevention (see asphyxia prevention section)

*It is important to review every  
child death and learn how to  
prevent it from happening again.*

# Appendix A

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# Appendix C

## Wisconsin Child Death Review Council members

**Paula Brown**, Wisconsin Department of Children and Families

**Jan Cummings**, Wisconsin Department of Justice

**Tom Fallon**, Wisconsin Department of Justice

**Linda Hale**, Wisconsin Department of Health Services

**James Holmes**, Wisconsin Department of Justice

**Murray Katcher, MD, PhD**, Wisconsin Department of Health Services

**Doug Kelley, MD**, Fond du Lac County Medical Examiner

**Barbara Knox, MD**, American Family Children's Hospital, Department of Pediatrics

**William Perloff, MD, PhD**, Chair, Wisconsin Child Death Review Council

**Brian Peterson, MD, ME**, Milwaukee County Medical Examiner

**Robin Ross**, Consumer Product Safety

**Ann Rulseh**, Wisconsin Department of Justice

**Todd Schaller**, Wisconsin Department of Natural Resources

**Lynn K. Sheets, MD, FAAP**, Children's Hospital of Wisconsin

**Mary Anne Snyder**, Children's Trust Fund

# Appendix D

## Wisconsin child death review program staff

### **Abby Collier, MS**

Children's Health Alliance of Wisconsin

### **Timothy E. Corden, MD**

Associate Professor of Pediatrics, Medical College of Wisconsin, Associate Director of the Pediatric Critical Care Unit at Children's Hospital of Wisconsin, Co-director of the Policy Core, Injury Research Center, Medical College of Wisconsin

### **Brianna Kopp, MPH**

Wisconsin Department of Health Services

### **Karen Ordinans**

Children's Health Alliance of Wisconsin

### **Amy Schlotthauer, MPH**

Medical College of Wisconsin Injury Research Center

### **Sally Smaida, MPH**

Medical College of Wisconsin Injury Research Center

### **Becky Turpin, MS**

Wisconsin Department of Health Services

# Appendix E

## Wisconsin local team coordinator contact information

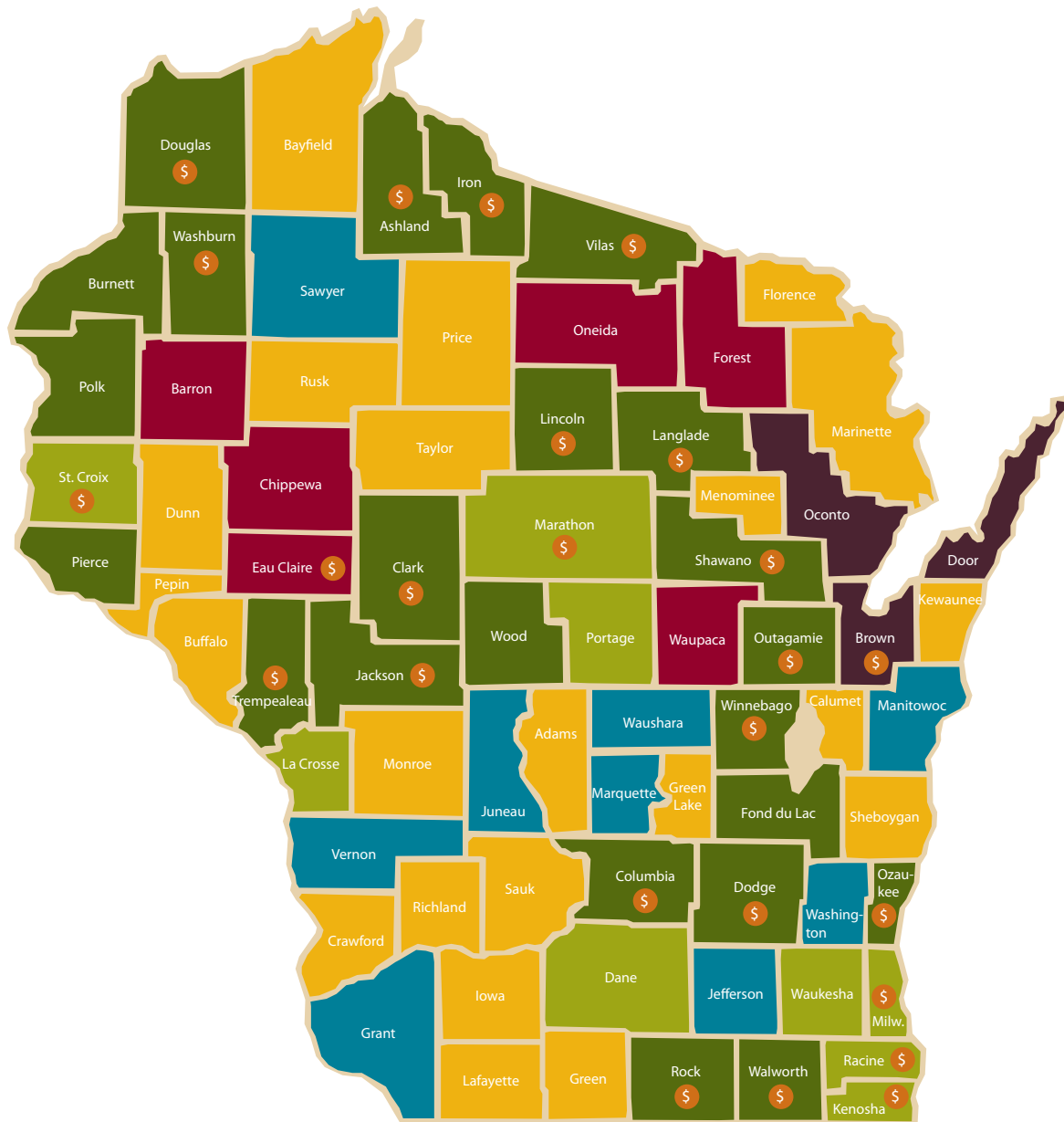
<b>Ashland County:</b>	Terri Kramolis, Public Health Supervisor (715) 682-7004 ext. 214 Terrik@hsd.co.ashland.wi.us
<b>Brown County Regional:</b>	Al Klimek, Medical Examiner (920) 448-4185 Klimek_AG@co.brown.wi.us
<b>Burnett County:</b>	Katherine Peterson, Health Officer (715) 349-7600 ext. 1231 kmpeterson@burnettcounty.org
<b>Clark County:</b>	Kerry Kirn, Detective (715) 743-5358 Kerry.kirn@co.clark.wi.us
<b>Columbia County:</b>	Mark Hahn, Detective (608) 742-2171 mark.hahn@ci.portage.wi.us
<b>Dane County:</b>	Barry Irmén, Acting Coroner (608) 284-6000 irmen@co.dane.wi.us
<b>Dodge County:</b>	P.J. Schoebel, Medical Examiner (920) 386-3726 pschoebel@co.dodge.wi.us
<b>Douglas County:</b>	Joseph A. Krieg, Detective (715) 395-7408 kriegj@ci.superior.wi.us
<b>Fond du Lac County:</b>	Sandy Fryda, Public Health Nurse (920) 929-7137 Sandy.fryda@fdlco.wi.gov
<b>Iron County:</b>	Zona Wick, Health Officer (715) 561-2191 wickz@ironcountywi.org

<b>Jackson County:</b>	Chris Hovell, Health Officer (715) 284-4301 ext. 372 Christine.hovell@co.jackson.wi.us
<b>Kenosha County:</b>	Karyn van Heijningen, Community Impact Programs (262) 945-0241 kvanheijningen@psgcip.com
<b>La Crosse County:</b>	Janet Holter, Department of Health & Human Services (608) 785-6070 holter.janet@co.la-crosse.wi.us
<b>Langlade County:</b>	Karen Hegranes, Assistant Health Officer (715) 627-6250 khegranes@co.langlade.wi.us
<b>Lincoln County:</b>	Paul Proulx, Coroner (715) 218-0555 pproulx@charter.net
<b>Marathon County:</b>	John Larson, Coroner (715) 261-1199 jmlarson@mail.co.marathon.wi.us
<b>Milwaukee County:</b>	Brian Peterson, MD, Medical Examiner (414) 223-1200 Brian.peterson@milwcnty.com
<b>Outagamie County:</b>	Melissa Blom, Children, Youth & Families Division Manager (920) 832-5183 BlomMA@co.outagamie.wi.us
<b>Ozaukee County:</b>	Kristen Gruebling, Director kgruebling@co.ozaukee.wi.us (262) 284-8170
<b>Pierce County:</b>	Sue Dzubay, Medical Examiner (715) 273-6799 sdzubay@sbcglobal.net
<b>Polk County:</b>	Bonnie Leonard, Public Health Supervisor (715) 485-8508 bonniel@co.polk.wi.us

<b>Portage County:</b>	Scott Rifleman, Coroner (715) 346-1400 Riflemas@co.portage.wi.us
<b>Racine County:</b>	Cheryl Mazmanian, Health Officer (262) 763-4931 cheryl.mazmanian@aurora.org
<b>Rock County:</b>	Michelle Walworth, Deputy Coroner (608) 757-5908 Walworth@co.rock.wi.us
<b>Shawano County:</b>	Lynnae Zahringer, Supervisor-Children and Families (715) 526-4722 lynnae.zahringer@co.shawano.wi.us
<b>St. Croix County:</b>	Eric Johnson, District Attorney (715) 386-4658 Eric.johnson@da.wi.gov
<b>Trempealeau County:</b>	Bonnie Kindschy, Coroner (715) 538-4351 coronerblk@yahoo.com
<b>Walworth County:</b>	Dave Fladten, Walworth County Alliance for Children (262) 215-4477 dfladten@yahoo.com
<b>Washburn County:</b>	Jeri Pederson, Public Health Supervisor (715) 635-4400 jpederso@co.washburn.wi.us
<b>Waukesha County:</b>	Lynda Biedrzycki, MD, Medical Examiner (262) 548-7575 lbiedrzycki@waukeshacounty.gov
<b>Winnebago County:</b>	Teresa Paulus, Public Health Nurse (920) 232-3017 tpaulus@co.winnebago.wi.us
<b>Wood County:</b>	Ty Zastava (715) 421-8929 tzastava@co.wood.wi.us
<b>Vilas County:</b>	Paul Tirpe, Coroner (800) 472-7290

# Appendix F

## Current child death review teams in Wisconsin



### Map key

- \$ Mini grant awarded
- Team in planning stage
- Team conducting reviews >3 years
- Interested county
- Northeast regional team
- Team conducting reviews <3 years



[www.chawisconsin.org](http://www.chawisconsin.org)

**Children's Health  
Alliance of Wisconsin**

620 S. 76th St., Ste. 120  
Milwaukee, WI 53214

**(414) 292-4000**



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