Drowning of 1-4 Year Old Children in Swimming Pools and Spas

Surveillance Handbook

June 2010

California Chapter 4, American Academy of Pediatrics
Injury and Violence Prevention Program

Funded by California Kids’ Plates Grant Program

Copy downloadable at: http://www.ockeepkidssafe.org/drowning.htm
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Acknowledgements

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We convened a group of stakeholders on March 23, 2010, to review and make recommendations to the initial draft of the handbook. The expertise and knowledge of the group as well as the enthusiastic and lively discussion provided creative and useful feedback and recommendations. Those who were in attendance were: Steffanie Biegler, Child Abuse Prevention Council of Sacramento; Jeff Copeland, AMR Medical Transportation; Jane Elder, Orange County Emergency Medical Services; Mike Hallinan, Irvine Police Department; Shanna Holland, Center for Injury Prevention Policy and Practice; Travers Yoshio Ichinose, Orange County Health Care Agency; Marcia Kerr, US Consumer Product Safety Commission; Kim Patrick, Inland Empire Safe Kids; Cynthia Stoll, Riverside County EMS Agency; Roger Trent, Ph.D., California Department of Public Health; Maureen Williams, National Drowning Prevention Alliance; and Victoria Young, Riverside County Injury Prevention Services.

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Chapter 1 – Introduction

Overview of Project

The Foundations for Child Drowning Surveillance Project, funded by the California Kids’ Plates Grant Program in 2008, was designed to improve the quality and consistency of multi-agency drowning surveillance in California. The project objectives were: 1) to develop and produce a comprehensive report on the state of drowning surveillance in pools/spas among young children in Southern California; 2) to create a “How To Handbook” illustrating the necessary components for building successful multi-agency drowning surveillance protocols at the local, county, and state level; and 3) to promote the adoption of standardized drowning surveillance state-wide.

Background

Over the past decade, 1,002 California children under the age of 15 years died from drowning. Toddlers and preschoolers are at highest risk - 660 of the deaths were children ages 1-4 years. Drowning accounted for 30 percent of the injury deaths of children in this age group.¹ Studies consistently show that these deaths primarily occur in swimming pools and spas. Over the past ten years, twice as many 1-4 year old children died in swimming pools than in motor vehicles.¹ Swimming pool drowning death rates for children ages 1-4 years have declined over the past decade in California², yet drowning continues to be the leading cause of injury-related death for children of this age. Drownings are second only to congenital anomalies as a leading

cause of death to young children in California and exceed motor vehicles as a cause of injury death.\textsuperscript{1,3}

The statistics for the United States are only slightly different compared to California, with drowning being the second leading cause of injury death and third leading cause of all deaths to children 1-4 years of age.\textsuperscript{3} It has been estimated that for each childhood drowning fatality, about 4 children are hospitalized and 14 are seen in the emergency department and released.

Contrary to popular notion, young children do not thrash about or verbalize distress while drowning. Most drownings are silent and not observed. Hence, measures to prevent these incidents from occurring is key to decreasing morbidity and mortality from drowning. Numerous prevention programs have been undertaken to prevent toddlers dying in swimming pools and spas, and, indeed there have been reductions in drowning deaths. Yet, drowning remains the leading cause of injury-related death for young California children. A deeper understanding of factors underlying these events may lead to more specific and enhanced prevention efforts.

However, inconsistent and incomplete data on childhood drowning hamper monitoring of trends; ascertainment of risk factors; and the design and evaluation of prevention strategies. Public health surveillance (the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health) should be

\textsuperscript{3} http://www.cdc.gov/injury/wisqars/fatal.html
undertaken for childhood drowning. **An effective drowning surveillance system could be used to understand and monitor the epidemiology of drowning in order to set priorities and guide public health policy and strategies.** Data from a public health drowning surveillance system could be used to: measure the burden of drowning to young children; monitor trends in the burden of childhood drowning; identify risk and protective factors; guide the planning, implementation, and evaluation of programs to prevent and control drownings; and evaluate public policy. The data necessary to understand and address the issue of child pool and spa drownings relate to the child who drowned (demographics, social, behavioral, and medical history) and the environment where the incident occurred (supervision, body of water, barriers, circumstances, etc.) as well as temporal factors. A checklist of variables/information to consider in the review and analysis of childhood drowning cases is provided in Appendix 1.

**Purpose of Handbook**

The *Drowning of 1-4 Year Old Children in Swimming Pools and Spas Surveillance Handbook* has been designed as a tool to help localities access drowning data, enhance drowning data collection, and initiate new drowning surveillance systems. This Handbook has been designed for Child Death Review Teams (CDRTs) and their members; coroners/medical examiners; first responders (police, fire, and Emergency Medical Services); public health agencies; medical providers; and injury prevention organizations and agencies. The extent and comprehensiveness of childhood drowning

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4 The World Congress on Drowning and the World Health Organization define drowning to be “the process of experiencing respiratory impairment from submersion/immersion in liquid.” Drowning outcomes are classified as death, no morbidity, or morbidity. For the purposes of this document, drowning includes both fatal and nonfatal outcomes.
surveillance at the local and state level is dependent on available personnel; time and resources to commit to the project; the expertise and capabilities of agency personnel; and the level of commitment and willingness to champion the issue.

The flowchart on page 6 shows the various types of data sources and approaches that can be taken to obtain information about the extent of drowning in young children. At the very simplest level, data can inform on the extent of victims by age and gender, or incidents in a locale over a given period of time. Several existing systems can provide such information and are discussed in Chapter 3. The review process of CDRTs allows for more comprehensive surveillance on fatal drowning (Chapter 5). In addition, scene investigators (coroner/medical examiner and law enforcement) can provide extensive details surrounding the circumstances of child drowning incidents (Chapter 4). Finally, some communities have established stand alone drowning incident data reporting systems that provide more information about all incidents, including nonfatal and fatal. Examples of these approaches to drowning surveillance are presented in Chapter 6 of this Handbook as models that have the potential for replication in other communities.
Chapter 2 - Child Drowning Surveillance Project Summary

Funded by the California Kids Plate Grant Program, the goal of the project was to improve the quality and consistency of multi-agency drowning surveillance in California. The objectives of the project were:

- To develop and produce a comprehensive report on the state of drowning surveillance in pools/spas among young children in Southern California (Review existing surveillance instruments and procedures; develop a comprehensive data collection tool, conduct in-depth review and analysis of Orange County and Riverside County Coroner cases; prepare collaborative report summarizing data and identifying missing data elements necessary for advancing childhood drowning prevention).

- Create a “How To Handbook” illustrating the necessary components for building successful multi-agency drowning surveillance protocols at the local, county, and state level.

- Promote the adoption of standardized drowning surveillance state-wide.

Coroner Data Review Process

Coroner records are a comprehensive and accessible source for identifying cases of children who drown. The first objective of this project was to determine what level of detail is available in the coroner files related to child drowning; compare the data
available to a comprehensive child data collection tool; and determine what, if any, additional insights coroner reports may provide related to drowning risk and prevention.

This was carried out by conducting an in-depth review and analysis of Orange County and Riverside County Coroner cases of children 1-4 years of age who drowned. The Orange County Coroner’s office identified 46 pool/spa related drowning deaths of children ages 1-4 years occurring in Orange County from 2000-07. There were 23 Riverside County residents 1-4 years of age who drowned in Riverside County between 2003-07. The files were reviewed and data were abstracted onto a comprehensive data collection tool. Coroner case files which sometimes included police reports and Child Protective Services (CPS) reports were reviewed for the Orange County cases. For Riverside County, computerized investigation report summaries were reviewed.

A total of 69 cases were reviewed and analyzed. Thirty-eight percent of the children were two years of age, 29 percent were 1 year, 20 percent were 3 years and 13 percent were 4 years. Sixty-two percent were male. In-ground pools accounted for 51 of the cases and spas/hot tubs for 14. Eighty-eight percent of the incidents occurred at single-family residences with two-thirds of these being at the child’s own home. A detailed discussion of the findings can be found in the Foundations for Childhood Drowning Surveillance Drowning Data Report. A copy of the report is available at http://www.ockeepkidssafe.org/drowning.htm.

Conclusions

To assess the quantity of data available in the coroner files, frequencies of files containing documentation for the various variables were calculated. Quality of data was
determined by calculation of frequency breakdowns for the variable items, cross
-tabulations of select variables as well as in-depth reviews of the narratives.

We found that the coroner files contained an extensive amount of information related to
the circumstances surrounding child drowning deaths. The files varied considerably in
terms of the breadth and depth of information that was recorded. However, we were
able to identify patterns and issues that should be considered for monitoring trends and
informing prevention efforts.

In the absence of having hard copies of reports to review (coroner, police, CPS), it
appears that a system like Riverside County’s which uses computerized investigation
report summaries does a fairly good job of documenting information related to child
drowning. However, the review of the Orange County Coroner files indicated that there
is more data and rich detail available when there is access to all files (coroner
investigation notes and case summary notes, police reports, CPS records, medical
records).

Police routinely responded to the incident site where the child drowned. Because police
focus on investigating the circumstances that lead to an incident (in this case, the child
drowning), the police reports usually contained detailed information about the incident.
The coroner investigator, in turn, used the police reports and sometimes their own
investigation to help them determine the nature, cause, and circumstances of death.
This was usually well documented in the case summary notes in the coroner files.
There was, however, considerable variability in the extent and quality of drowning
related information documented in both the police reports and coroner case notes.
In summary, the coroner files appear to be a good source of readily accessible data on child drowning that could be used in a comprehensive fatal drowning surveillance system.
Chapter 3. Existing State Data Systems

EpiCenter California Injury Data

The Safe and Active Communities Branch (SACB) of the California Department of Public Health (CDPH) operates a web site where visitors can query California’s major injury data bases. The EpiCenter site provides data on California residents who get treatment or die because of an injury. Non-residents of California who drown in California are not counted. Currently, data are available for all injury deaths and for all injury hospitalizations. Emergency department data will be available soon.

Drownings and “near drownings” are counted according to the worst outcome. Thus if a patient dies while being treated in an emergency department or as an inpatient, only the death is counted. If a patient is treated in an emergency department, and later as an inpatient, only the impatient admission is counted. This ensures that one “drowning event” is only counted once, even if the patient showed up in more than one source of drowning data.

a. Fatal Data

Description:

SACB makes data available on its query web site, EpiCenter. EpiCenter identifies fatal cases by searching the electronic death certificate files of California residents for any record where the underlying cause of death was an injury (defined as cases where there was an external cause code as the underlying cause of death).

Drowning Relevant Data:
- Obtains information on age, gender, county of residence
- Drowning is listed as the underlying cause of injury
- Specific cause of injury codes related to pools and spas include
  - W67 Drowning and submersion while in swimming pool
  - W68 Drowning and submersion following fall into swimming pool

*How to access data:*

EpiCenter website - http://www.applications.dhs.ca.gov/epicdata/

**b. Nonfatal Hospital Discharge Data**

*Description:*

EpiCenter identifies nonfatal hospitalized injuries by searching hospital discharge data files (HDD files) for records where a California resident was hospitalized for an injury (an external cause of injury code was present in the record).

*Drowning Relevant Data:*

- Obtains information on age, gender, race/ethnicity, county of residence, expected source of payment, and length of hospital stay
- Near drowning is listed as the principal cause of injury
- Specific E code related to pools and spas is
  - E910.8 Other accidental drowning or submersion (Drowning in quenching tank or swimming pool)

*How to access data:*

EpiCenter website - http://www.applications.dhs.ca.gov/epicdata/
c. Emergency Department Data

Description:

EpiCenter identifies nonfatal emergency department (ED) treat and release injuries by searching ED discharge data files for records where a California resident was treated in an ED for an injury (an external cause of injury code was present in the record) but not subsequently hospitalized.

Drowning Relevant Data:

- Obtains information on age, gender, race/ethnicity, county of residence, expected source of payment, and length of hospital stay.
- Near drowning is listed as the principal cause of injury.
- Specific E code related to pools and spas is
  - E910.8 Other accidental drowning or submersion (Drowning in quenching tank or swimming pool).

How to access data:

EpiCenter website - http://www.apps.cdph.ca.gov/epicdata/

ED data is not available as of this writing.
CEMSIS – California EMS Information System

Description:

The California Emergency Medical Services Information System (CEMSIS) collects data from Local EMS Agencies (LEMSA) across the state. It is important to note that CEMSIS has two data reporting systems (CEMSIS-Trauma and CEMSIS-EMS). Currently CEMSIS-Trauma has extensive trauma data reported but it does not include drowning because drowning is not classified as a trauma in the California trauma system unless other associated injuries are found, e.g. spinal injury associated with diving and subsequent drowning. The CEMSIS-EMS began EMS911 data reporting with some counties in 2010 and will expand to others in the future. It should be noted that while the CEMSIS-EMS data standards reflect the data listed below, full compliance with local collection and subsequent transmission to the state of this data is inconsistent at this time.

Drowning Relevant Data in the CEMSIS-EMS:

- Collects data on age, gender, ethnicity, zip code, incident location type, scene GPS location, incident city and country, prior aid type and by whom, transport information, emergency department, and hospital disposition
- Data dictionary indicates some drowning specific data is also collected. These include:

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5 CEMSIS http://www.emsa.ca.gov/systems/default.asp
• Complaint noted by dispatch – drowning
• Condition code number – near drowning
• Cause of injury – drowning
• Cardiac arrest etiology – drowning
• Safety factors that affected incident
  • Swimming pool – self-closing, self latching gate
  • Swimming pool – no self latching gate
  • Swimming pool – surrounded by barrier fence
  • Swimming pool – no fence

*How to access data:*

Contact your LEMSA to see what data they collect and what they can provide.
Chapter 4. Child Death Review

Overview

The most important reason to review child deaths is to improve the health and safety of children and prevent other children from dying. Child death review (CDR) brings together government and community agencies to systematically share information on child death events and identify risk factors in the deaths. The goal is to understand how and why children die in order to take action to prevent other deaths.

Throughout the U.S., CDR programs differ in the types of deaths reviewed, composition of state and local teams, level of state support and leadership, supporting legislation and reporting systems. The National Center for CDR Policy and Practice, funded by the Maternal and Child Health Bureau, was established in 2002 as a resource center for state and local CDR programs. The National Center helps to standardize practices and build state and local team capacity to prevent deaths. They have developed an outstanding program manual to assist CDRTs with their review processes and includes guidelines on who should be members of the team and on what records should be used.

In addition, the National Center for CDR Policy and Practice had established an on-line reporting system. A standardized case report tool was developed with the guidance of a workgroup who developed a set of standardized data elements and data definitions. The case report is part of the CDR Case Reporting System, a web-based application that allows local and state users to enter case data, access and analyze their data and
download standardized reports via the internet. Recognizing the importance of quality data, the National Center has developed a comprehensive data dictionary and conducts trainings to assist teams in completing the case reporting system form.7

**California CDRTs and Data Reporting**

Local CDRTs have been functioning in California since the early 1980s, with Los Angeles County starting in 1978. Since 1988, teams are formally authorized (not mandated) in statute (Penal Code §11174.32). Most California counties continue to maintain CDRTs, with 50-55 local CDRTs active at any time. Review selection criteria vary by team. Most CDRTs review all sudden, traumatic and/or unexpected child deaths (i.e., Coroner cases), including injury, natural, and undetermined deaths. Generally teams review cases of children that are less than 18 years old. Prevention is the overriding priority, but California’s CDRTs have several objectives: 1) to assist in identifying and investigating potential child maltreatment cases; 2) to assist in protecting siblings and other children; 3) to identify and assist in improving agency and systems problems; and 4) to prevent future child deaths from all causes through identifying the circumstances surrounding child deaths and developing recommendations and effective action.

An informal network of regional CDRT coordinators exists in California to maintain communication among local CDRTs and state agencies. There is a mandate for the Attorney General's Office to support a state team but it is contingent upon funds being

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available. The State CDR Council was established in 1997 and disbanded in 2008 when state funds were cut.

CDPH created the Fatal Child Abuse and Neglect Surveillance (FCANS) Program in 2000 to carry out its mandate to track data on fatal child abuse and neglect (Penal Code §11174.34). Although State funds for the FCANS Program were cut in 2008, funding is now provided through two federal grants: Centers for Disease Control and Prevention (CDC) Prevention Block Grant and the federal Maternal Child Adolescent Health Title V Block Grant. Contact information is

Fatal Child Abuse and Neglect Surveillance (FCANS) Program
Attn: Steve Wirtz, Ph.D.
Safe and Active Communities (SAC) Branch
California Department of Public Health
PO Box 997377, MS 7214
Sacramento, CA 95899-7377
(916) 552-9831  Fax (916) 552-9810
steve.wirtz@cdph.ca.gov

Functioning local CDRTs are required under Penal Code §11174.34 to submit data to this statewide monitoring system. The FCANS Program has adopted the National Center for CDR Case Reporting System for local teams to use to report to the state. To use the online system, local CDRT Coordinators and/or designated representatives must sign a confidentiality statement and be assigned a username and password to access the California page of the National CDR Case Reporting System. This secure...
online system allows local teams to enter, edit, and delete cases, manage their data storage and access, generate ~25 standard reports on their own county data, and to download their data for further analyses. For most teams it has become their primary data collection and management system. The current data form can be viewed at www.childdeathreview.org under CDR Reporting Tools, specifically at: http://www.childdeathreview.org/reports/CDRCaseReportForm2-1-11009.pdf. Training on using the data collection form and online system is provided by FCANS Program staff either in person or by phone and email as needed. The standardized online or hardcopy data reporting forms are completed by the local CDRT for all mandated cases and for most other reviewed cases as well. If hardcopy forms are completed, they are sent to the FCANS Program and entered into the online system at the state level.

The FCANS Program has approximately $150,000 of local assistance money to reimburse local teams for submission of data forms. Once service orders or contracts have been executed with a local team’s fiscal agent, teams are reimbursed at a rate of $150 per case up to the contract’s allocated amount. Currently, 35 CDRTs in California are using the online National CDR System or submitting hardcopy forms, covering the vast majority of the state’s population.
Child Death Review Team Guidelines for Drowning Surveillance

Given that there is a process in place that examines child deaths (i.e. CDRTs) and a mechanism for systematically reporting these deaths and the circumstances surrounding them (National Center for CDR Case Reporting System), there is an opportunity to utilize this system to conduct surveillance on child drowning deaths.

However, there are some limitations with the current level of detail related to childhood pool/spa drownings that is collected through that system. As part of this Kids Plates project, we developed the CDR Case Reporting Form Pool/Spa Drowning Supplement to the National Center for CDR Case Reporting Form. The additional information obtained in the supplement will enhance our understanding of risks related to child drowning and may be useful for designing more targeted and appropriate interventions.

Following are the recommended steps for CDRTs to follow for the review and surveillance of drowning deaths of children less than five years of age involving pools and spas.

Step 1. Conduct Reviews of All Fatal Child Drowning Cases

- Obtain records as recommended in the National CDR Program Manual (Appendix 2 contains a list of recommended records to review for drowning deaths).
- Include Police and Medical Examiners/Coroners who are core members of CDRTs in team meetings. It is especially important to review copies of their...
reports, including pictures and diagrams, to better understand the circumstances surrounding the drowning incident.

- Invite the officer who was at the scene to participate in the case review. If this is not possible, a phone call and interview by a CDRT member in advance of the CDR meeting is recommended. Use the Scene Investigation Guidelines (page 18 of this document) when obtaining information about the drowning incident.

- Use the Issues and Questions to Consider When Conducting Review of Child Drowning Case (Appendix 1) checklist to assist in collecting information.

- In communities with a large number of child drownings, consider establishing a drowning review subcommittee or scheduling special review meetings to address groups of child drowning deaths.

**Step 2. Complete and Submit the National CDR Case Reporting Form**

- Print (http://www.childdeathreview.org/reports/CDRCaseReportForm2-1-11009.pdf) or photocopy the National CDR Case Reporting System Case Report 2.1 (Appendix 3 of this document).

- Complete the Case Report form following the guidelines outlined in the CDR Program Manual.\(^8\) (It is recommended that teams complete a hard copy of the form before submitting on-line because data will become available before, during and after the review meeting. Filling out a hard copy first will make it easier to submit a complete on-line record of the review.)

- Follow the California guidelines for submitting the data form.

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Step 3. Complete Child Drowning Pool/Spa Supplement

- The Child Drowning Pool/Spa Supplement should be used for all pool/spa drowning deaths of children less than five years of age.

- Photocopy the Child Drowning Pool/Spa Supplement on pages 16 and 17 or download a copy from http://www.ockeepkidssafe.org/drowning.htm. Complete the Supplement as part of the child death review process.

- Currently there are no procedures in place for submitting the supplemental data to the state or national CDR system. (Negotiations are currently underway to incorporate the Supplement into the next version of the national on-line reporting system).

- However, it is recommended that local teams review the supplement data along with the National CDR Case Reporting System case and summary data reports for the drowning cases they have reviewed. The National System can provide teams with individual case reports as well as several standardized reports, including two drowning specific reports.10

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9 Local California CDR Teams are required to submit data to the FCANS Program and are encouraged to participate in the national system. For further information, contact Steve Wirtz, PhD, FCANS Program, SAC Branch, CDPH, (916) 552-9831, steve.wirtz@cdph.ca.gov.

10 One of the standardized drowning reports provides demographic data by place of drowning. The other standardized report provides factors related to flotation device, child’s swim ability, barriers, supervision and supervisor alcohol or drug impaired, also by place of drowning.
To assist local teams with the process of compiling and summarizing the supplemental drowning data, we developed an easy to use data entry and analysis tool. This program as well as the standardized drowning reports and individual case summaries from the National System will assist local teams in better understanding issues related to young childhood pool and spa drowning in their communities. Information on how to obtain a copy of a CD with our program and instructions for use is available at http://www.ockepkidsssafe.org/drowning.htm.

**Step 4. Work with local law enforcement and medical examiner/coroner to improve data**

- Encourage local law enforcement, medical examiners and coroners to improve and report on the data collected through scene investigations.

- Disseminate *Drowning Surveillance Guidelines for Scene Investigators* (pages 18 and 19) to local law enforcement and coroner/medical examiner agencies.
Swimming Pool and Spa Drowning Surveillance Supplement for Children Less than 5 Years of Age

<table>
<thead>
<tr>
<th>CASE NUMBER</th>
<th>Date/Controlled Number/Place of Rehearsal/Sequence of Revision</th>
</tr>
</thead>
</table>

1. INCIDENT SITE INFORMATION
   a. Where was pool/spa located where incident occurred? (select one)
      - Single family residence
      - Neighborhood Association
      - Hotel/inn/hotels
      - Private Club
      - Public Pool/spa
      - Other (specify) ______________________
      - Unknown

   b. Which of the following describes the distribution of incident at the time of the incident? (select all that apply)
      - No adults were present
      - One adult was present
      - 2-4 adults were present
      - 5 or more adults were present
      - Child was at home
      - Child was at a swimming pool/spa
      - Child was in a children's pool
      - Child was swimming pool/spa
      - Child was a children's pool
      - Other (specify) ______________________
      - Unknown

   c. What was the type of pool/spa where incident occurred?
      - Outdoor
      - Indoor
      - Indoor/Outdoor
      - Other (specify) ______________________
      - Unknown

   d. Was pool/spa being used by the day of the incident?
      - Yes
      - No
      - Unknown

   e. Were there indications of alcohol or drug use at the incident site?
      - Yes
      - No
      - Unknown

2. Was pool/spa water? (select all that apply)
   - Clear
   - Dirty
   - Green
   - Obscured by tree branches
   - Other (specify) ______________________
   - Unknown

3. What barriers/employees of protection existed to prevent access to the pool/spa? (select all that apply)
   - Manual or semi-automatic pool safety cover
   - House entry alarm(s)
   - Pool gate alarm
   - Other (specify) ______________________

4. For residential pool/spa only, select the number of the diagram that best describes the pool, fencing and house where the incident occurred:
   1. No Property Line Fence
   2. Property Line Fence
   3. Property Line Fence
   4. Property Line Fence
   5. Property Line Fence
   6. Property Line Fence

5. If property line fence
   - Fence type ______________________
   - Fence height ______________________
   - Condition of fence
   - Good
   - Damaged/deteriorating
   - What sizes openings (in, in) are large enough for child to pass through or under?
   - Yes
   - No
   - Was fence climbable?
   - Yes
   - No
   - Had self closing, self-latching gates?
   - Yes
   - No

6. If pool fence
   - Fence type ______________________
   - Fence height ______________________
   - Condition of fence
   - Good
   - Damaged/deteriorating
   - What sizes openings (in, in) are large enough for child to pass through or under?
   - Yes
   - No
   - Was fence climbable?
   - Yes
   - No
   - Had self closing, self-latching gates?
   - Yes
   - No
### 2. CHILD INFORMATION

<table>
<thead>
<tr>
<th>a. Where was child last seen before incident?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Swimming/lying in pool/poolside</td>
</tr>
<tr>
<td>○ Playing outside in vicinity of poolside</td>
</tr>
<tr>
<td>○ Playing outside in backyard, not near poolside</td>
</tr>
<tr>
<td>○ Playing outside in front yard</td>
</tr>
<tr>
<td>○ Playing inside</td>
</tr>
<tr>
<td>○ Watching TV/video inside</td>
</tr>
<tr>
<td>○ Sleeping inside</td>
</tr>
<tr>
<td>○ Using indoor or on property not in vicinity of poolside</td>
</tr>
<tr>
<td>○ Going into door is area with pool/poolside</td>
</tr>
<tr>
<td>○ Underwater</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
<tr>
<td>○ UnKnown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. How did child gain access to pool/poolside?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Safety cover/ net was removed</td>
</tr>
<tr>
<td>○ Pool fence gate was proped/left open</td>
</tr>
<tr>
<td>○ Child opened/unlocked pool fence gate</td>
</tr>
<tr>
<td>○ Child went through, under or over pool fence</td>
</tr>
<tr>
<td>○ Parent/child left open</td>
</tr>
<tr>
<td>○ Child opened/did not close/prop pool cover</td>
</tr>
<tr>
<td>○ Child opened/unlocked sliding door from house</td>
</tr>
<tr>
<td>○ Child opened/unlocked hinged door from house</td>
</tr>
<tr>
<td>○ Husband or Visor left in pool/unattended</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
<tr>
<td>○ Door alarm did not sound was disarmed</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Had child had formal swim instruction?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Yes</td>
</tr>
<tr>
<td>○ No</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. What was child's attire?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Swimwear</td>
</tr>
<tr>
<td>○ Other clothing</td>
</tr>
<tr>
<td>○ Nothing</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Had any of these previously occurred with the child? (List all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Fallen out of house by self</td>
</tr>
<tr>
<td>○ Unattended gate/fence door</td>
</tr>
<tr>
<td>○ Been turned by the pool</td>
</tr>
<tr>
<td>○ Fallen into the water</td>
</tr>
<tr>
<td>○ Gone into the pool unattended</td>
</tr>
<tr>
<td>○ Opened doors leading to pool</td>
</tr>
<tr>
<td>○ Jumped in the pool unexpectedly</td>
</tr>
</tbody>
</table>

### 3. SUPERVISION/SUPERVISOR INFORMATION

<table>
<thead>
<tr>
<th>a. Select which of the following best describes the supervisory status of the child at the time of the incident:</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ One adult clearly responsible for supervising the child</td>
</tr>
<tr>
<td>○ Two or more adults sharing responsibility for supervision</td>
</tr>
<tr>
<td>○ Multiple adults no one clearly assigned supervision responsibility</td>
</tr>
<tr>
<td>○ Child thought to be ok because was with other children</td>
</tr>
<tr>
<td>○ Another child assigned to supervise child</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Where was the supervisor at time of incident?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ In house</td>
</tr>
<tr>
<td>○ Outside, near or on poolside</td>
</tr>
<tr>
<td>○ Outside, not in vicinity of poolside</td>
</tr>
<tr>
<td>○ Not present on premises</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. At time of incident was supervision (Select all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Drug impaired</td>
</tr>
<tr>
<td>○ Alcohol impaired</td>
</tr>
<tr>
<td>○ Asleep</td>
</tr>
<tr>
<td>○ Napping with children</td>
</tr>
<tr>
<td>○ Impaired by illness or disability (specify)</td>
</tr>
<tr>
<td>○ Distractions—doing what</td>
</tr>
<tr>
<td>○ On phone</td>
</tr>
<tr>
<td>○ Preparing meal</td>
</tr>
<tr>
<td>○ Worried around house</td>
</tr>
<tr>
<td>○ Watching TV</td>
</tr>
<tr>
<td>○ Attending to another child</td>
</tr>
<tr>
<td>○ Cleaning</td>
</tr>
<tr>
<td>○ Talking/Visiting with another persons</td>
</tr>
<tr>
<td>○ In car</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
<tr>
<td>○ Supervisor absent from location of incident</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Had supervision taken CPR?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Yes</td>
</tr>
<tr>
<td>○ No</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Had supervision taken CPR?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Yes</td>
</tr>
<tr>
<td>○ No</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

### 4. EMERGENCY RESPONSE INFORMATION

<table>
<thead>
<tr>
<th>a. Who initiated CPR?</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Supervisor</td>
</tr>
<tr>
<td>○ Police/resident/neighbor at incident location</td>
</tr>
<tr>
<td>○ Bystander at incident site</td>
</tr>
<tr>
<td>○ Neighbor, but not at incident location</td>
</tr>
<tr>
<td>○ Police</td>
</tr>
<tr>
<td>○ Paramedics</td>
</tr>
<tr>
<td>○ Other (specify)</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Estimated time to initiate CPR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Immediately within minutes</td>
</tr>
<tr>
<td>○ Delayed</td>
</tr>
<tr>
<td>○ Not until emergency response got to scene</td>
</tr>
<tr>
<td>○ Unknown</td>
</tr>
</tbody>
</table>
Chapter 5. Guidelines for Scene Investigators (Police & Coroner/ME)

Law Enforcement and Coroners/Medical Examiners conduct scene investigations which contain key information for CDRTs. The scene investigation reports can provide essential insights and details into the circumstances surrounding the drowning death of a child when documented properly. This information is useful for public health professionals and others interested in preventing childhood drowning.

Descriptive documentation, photographs and sketches of the scene as well as information obtained from witness interviews can provide important insights into the circumstances and risk factors for child drowning. A detailed narrative description of the incident can provide a clear understanding of the sequences of events before, during and after the incident and the circumstances involved.

Specifically, the areas that are of interest that would advance knowledge of factors that contribute to child drowning and could guide interventions and measures to prevent child drownings are:
## Circumstances leading up to and at the time of the drowning

<table>
<thead>
<tr>
<th>Incident information</th>
<th>Body of Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Type of dwelling or facility</td>
<td>• Type (i.e. in-ground pool, spa, etc.)</td>
</tr>
<tr>
<td>• Site of incident (i.e. single family home, community pool, apartment pool) if home, whose; rental or HUD</td>
<td>• If pool/spa, when built</td>
</tr>
<tr>
<td>• Number of people at scene, presence of other children</td>
<td>• Condition of water (i.e. murky, green)</td>
</tr>
<tr>
<td>• Occasion (i.e. birthday party, neighborhood gathering, BBQ, etc.)</td>
<td>• Objects/toys in water</td>
</tr>
<tr>
<td>• Drug and alcohol use and by whom</td>
<td>• Take photos</td>
</tr>
</tbody>
</table>

### Barriers or other protective devices to prevent children from accessing water

- Fences (both property line and those around pool)
  - Description of each in terms of type, height, general condition, whether or not a child can go through, over or under
- For pool fence, does it completely surround pool
- Gates (self-closing/self latching, open or closed)
- Door alarms, locks, pool cover, other measures
- Type, general condition, functionality and use
- Take photos of the above.

### Child

- Specifics on how child gained access to water
- Where was and what was child doing prior to the incident
- How long was child missing
- Swim ability, history of swim lessons
- Prior risk behaviors
- Clothing
- Use of flotation device
### Supervision
- Degree and level of supervision
- Who was supervising, age and what were they doing
- Supervisor swim and CPR ability
- Drug and alcohol use - will they submit to Preliminary Alcohol Screening (PAS)

### CPR
- By whom, how long, and their ability.
- Response times of police and fire.
- Delay time in calling 911 from time child was observed

**Documenting presence or absence of relevant information is important.** If there is no documentation related to a particular item, a determination on whether or not this is a problem or risk factor cannot be made. For example, if water clarity was not documented for all cases, we cannot make a determination if this is an issue in the drowning of young children.

Two resources are available for observing and documenting drowning related information: *Quick Reference Guide for Scene Investigators* (next page) and Appendix 1. *Issues and Questions to Consider When Conducting Review of Child Drowning Case.*
Quick Reference Guide for Scene Investigators
To facilitate incident comparison and data collection, please refer to this guide before completing investigation report.

Property Line Fencing – In a home with a pool or spa, this type of fence is typically positioned along the property line in an effort to keep neighboring children and uninvited adults from accessing the pool/spa. Property line fencing is an important barrier, but it does not restrict access to the pool area from the home itself.

Isolation Fencing – This fencing is designed to restrict access from the house structure to the pool/spa area by completely separating the house from the pool/spa. Proper placement of Isolation Fencing allows access to the pool/spa ONLY through the gate(s) in that fence. There is no direct access from the house or garage to the pool through doors or windows.

Barrier Standards – Fences should be at least 4 feet high (CA code requires 60” for a new pool, but does allow for mesh fencing, which would probably be 48”), climb-resistant and well maintained. There should be NO openings in which a child can pass through or under the fence (4 inches or less between vertical members and/or at the base of the fence). Fences should have gates that are self-closing, self-latching and open out from the pool/spa. All gates and alarms should be functional and in good working order. (Note: you never want a self-locking gate on a residential pool, as the gate tends to be propped open during a pool party or activity, since not everyone has a key, and the self-locking gate may prevent quick rescue should it be necessary. Key-lockable is good, along with self-latching.)

Self-Closing / Self-Latching Gates – A properly installed gate will open outward from the pool/spa area. A self-closing gate will operate on hinges that allow the gate to completely close by itself. A self-latching gate means that the latch catches securely by itself. Latches should be child resistant, with the release knob mounted at least 54” from grade.

Pool and Spa Safety Covers – Not all covers are designed for safety (some are for heating purposes only). A safety cover meets American Society for Testing and Materials (ASTM) International voluntary standard F1346-9, which includes a requirement to hold a minimum of 485 pounds. They can be motor-driven (automatic) or manual.

Pool Safety Nets – These woven-rope type structures prevent full access to the water. When installed, they secure to permanent connectors installed directly into the concrete decking of the pool area, hold a minimum of 485 pounds and must have a maximum opening of 4” or less.

Door and Window Alarms – These are special alarms (battery or wired to home electrical system) on pool-access doors and windows that sound loudly throughout the house when a door or window is opened unexpectedly. They should have a temporary bypass switch located at least 54” from the ground, which allows an adult to pass through the door without activating the alarm. This switch should automatically reset after each use. An alarm connected to a home security system is NOT designed for drowning prevention.

Pool Alarms – Also known as water alarms, these either float in the water or are attached to the side of the pool, and sound when a child or other large object disturbs the water.

Floaties / Water Wings – Flotation devices such as inflatable arm bands, pool noodles, inflatable water rings and rafts are NOT US Coast Guard approved. These should not be used in place of US Coast Guard approved life jackets.

California Pool Safety Law - California’s Swimming Pool Safety Act (Health and Safety Code Sections 115920-115929) requires at least one approved safety barrier be in place all pools and spas built after January 1, 1998 and for any pools being remodeled.
Chapter 6. Local Drowning Surveillance Systems

This chapter describes five successful, specially designed, stand-alone, local drowning surveillance systems. The lead agencies for these systems include a state health department, county health department, fire agency, emergency medical services agency, and Safe Kids drowning prevention coalition. The methods and approaches for collecting data vary greatly between the systems. However, they are similar in that none has dedicated funding for personnel and resources. Despite these challenges, each has been successful because a champion has been committed to maintaining data collection, thus ensuring the continuation and viability of their drowning surveillance efforts. These five drowning surveillance systems are used to guide drowning prevention efforts in their respective communities; they serve as exemplary models for other communities to emulate.
The Riverside County Department of Public Health Injury Prevention Services developed an active surveillance system for drowning. Injury Prevention Services (IPS) of Riverside County Public Health Department developed the Submersion Incident Report Form (SIRF) Program in 2004 with funding from First 5 Riverside. A task force was created by IPS to look into the issue of drowning and strategies for decreasing the drowning rate. The IPS task force determined that the priority would be to create and implement a more functional drowning data collection program that would provide details into how children are gaining access to water.

First steps included meeting with law enforcement and first response agencies to discuss their involvement in collecting the data. With their input, and referencing the successful drowning incident surveillance program in Maricopa County, Arizona, a comprehensive data collection form was developed for the SIRF Program. The intention was for first responders, whether law enforcement, fire personnel or paramedic units to complete the form after responding to any drowning incident in Riverside County. The completed forms were sent back to IPS for data entry and analysis by Riverside County Department of Public Health/Epidemiology and Program Evaluation Branch.

Beginning in June 2004, emergency first responders filled out a paper form and submitted it to the department for computer entry. In 2007, an internet-based system using Survey Monkey was initiated, with minor revisions in the questions. Emergency first responders can log into the system and enter the data directly. Some paper forms...
continue to be submitted and entered. Minor revisions to the questions were made again in 2008. Currently in Riverside County, data are submitted to IPS by fire, law and EMS personnel. Medical aid is provided by a coordinated effort from both fire and EMS responders. It is not uncommon to receive two or three SIRF forms per incident. The annual number of reports has increased since the inception of the project – 127 reports (representing 95 incidents) were submitted in 2009, up 76 percent from 2007.

IPS follows the cases and determines the disposition of hospitalized cases. Children are often transferred out of county making it difficult to obtain patient outcome information. In addition, issues with confidentiality, Health Insurance Portability and Accountability Act (HIPAA) and CPS referrals can be challenging. In the case of fatal child drownings, prior CPS investigations of the family and any prosecution are followed up in the Riverside CDRT.

The major challenge for IPS has been maintaining the SIRF project without dedicated funding for staff time and resources. The on-line form has not eliminated the need to follow up with first responders on incomplete information; hard to read faxed copies (older paper copies of SIRF continue to be used); and to clarify information between agencies when observations for the same scene vary from one report to another. Considerable staff time is also needed to maintain contact with correct agency personnel (nursing, law enforcement and fire move positions frequently) to obtain outcome information and to distribute new materials and information.

Contact:
SUBMERSION INCIDENT REPORT FORM  SIRF
To be completed on all drowning occurring in Riverside County = fatal & non-fatal, adults and children.

<table>
<thead>
<tr>
<th>BASIC INCIDENT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Incident: __________ Time of Incident: __________</td>
</tr>
<tr>
<td>Year Agency’s Incident Number: _________________________</td>
</tr>
<tr>
<td>Reporting Agency: _________________________________</td>
</tr>
<tr>
<td>Street name: ___________________</td>
</tr>
<tr>
<td>City: ___________________</td>
</tr>
<tr>
<td>Zip code: ___________________</td>
</tr>
<tr>
<td>Type of Dwelling:  □ House  □ Apartment  □ Condo</td>
</tr>
<tr>
<td>□ Hotel/Motel  □ NA  □ Other: ___________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VICTIM INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of Victim: _______ Sex: □ M  □ F</td>
</tr>
<tr>
<td>Victim's Race/Ethnicity:  □ Unknown</td>
</tr>
<tr>
<td>□ American Indian  □ Asian  □ Black  □ Hispanic</td>
</tr>
<tr>
<td>□ White  □ Multi-racial  □ Other: ___________________</td>
</tr>
<tr>
<td>Victim Last Seen: □ Unknown</td>
</tr>
<tr>
<td>□ Swimming  □ Playing Outside  □ Playing Inside</td>
</tr>
<tr>
<td>□ Sleeping  □ Other: ___________________</td>
</tr>
<tr>
<td>Est. length of time submerged: ___________________  □ Unknown</td>
</tr>
<tr>
<td>Type of Clothing Worn by Victim: □ Unknown</td>
</tr>
<tr>
<td>□ Swim suit  □ Day clothing  □ Pajamas  □ None</td>
</tr>
<tr>
<td>Alcohol and/or drugs used: □ Yes  □ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATER SOURCE INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site of Incident: □ Unknown</td>
</tr>
<tr>
<td>□ Victim Residence  □ Relative Residence</td>
</tr>
<tr>
<td>□ Neighbor Residence  □ Friend Residence</td>
</tr>
<tr>
<td>□ Sitters/Daycare Provider  □ Hotel/Motel</td>
</tr>
<tr>
<td>□ Public (community, county, city): □ Unknown</td>
</tr>
<tr>
<td>□ Other: ___________________</td>
</tr>
<tr>
<td>Water Clarity: □ Clear  □ Cloudy  □ Under 18” (approx. depth ______)</td>
</tr>
<tr>
<td>□ Muddy  □ Green  □ 18” – 48”  □ Over 4”</td>
</tr>
<tr>
<td>□ Unknown  □ Unknown</td>
</tr>
<tr>
<td>Water Type: □ Unknown</td>
</tr>
<tr>
<td>□ Pool – In ground  □ Spa/Hot Tub  □ Bathtub</td>
</tr>
<tr>
<td>□ Pool – above ground  □ Tilet  □ Bucket</td>
</tr>
<tr>
<td>□ Child wading pool  □ Lake or pond  □ Stream/river</td>
</tr>
<tr>
<td>□ Canal/irrigation ditch  □ Other: ___________________</td>
</tr>
<tr>
<td>Toys or objects in water? □ Yes  □ No  □ NA  □ Unknown</td>
</tr>
<tr>
<td>Yes, describe: ________________________________________________</td>
</tr>
<tr>
<td>Pool/spa built before 1997? □ Yes  □ No  □ Unk  □ NA</td>
</tr>
</tbody>
</table>

| Completed by: ___________________ |
| Email Address: ___________________ |
| Contact Phone: ___________________ |

<table>
<thead>
<tr>
<th>A: ADULT SUPERVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor(s) at time of incident: □ Unknown  □ NA = adult</td>
</tr>
<tr>
<td>□ Mother  □ Father  □ Sibling</td>
</tr>
<tr>
<td>□ Babysitter/Childcare Provider</td>
</tr>
<tr>
<td>□ Pool party in progress at time of submersion</td>
</tr>
<tr>
<td>□ Other (specify): ___________________</td>
</tr>
<tr>
<td>Supervisor activity immediately prior to incident: ___________________</td>
</tr>
<tr>
<td>Alcohol and/or drugs used: □ Yes  □ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: BARRIER INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Barriers Present: □ Yes  □ No  □ Unk  □ NA</td>
</tr>
<tr>
<td>2nd fence around pool present □ Yes  □ No  □ Unk  □ NA</td>
</tr>
<tr>
<td>Self-closing/Self-latching gate □ Yes  □ No  □ Unk  □ NA</td>
</tr>
<tr>
<td>Other barriers/alarms present: □ Unknown/unable to access</td>
</tr>
<tr>
<td>□ Sliding Door Alarm</td>
</tr>
<tr>
<td>□ Pool Cover/Alarm</td>
</tr>
<tr>
<td>□ Pool net</td>
</tr>
<tr>
<td>Other Barrier: ___________________</td>
</tr>
<tr>
<td>Access to Pool by Victim: □ unknown</td>
</tr>
<tr>
<td>□ Direct Access by Adult</td>
</tr>
<tr>
<td>□ Direct Access by Child/Ad barriers or supervision</td>
</tr>
<tr>
<td>□ Child brought in to water area by other person</td>
</tr>
<tr>
<td>□ Pet/Child</td>
</tr>
<tr>
<td>Explain how victim got through barrier(s): ___________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C: CLASSES/EMERGENCY PREPARATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was rescue equipment near water? □ NA</td>
</tr>
<tr>
<td>□ Shepherd’s hook  □ life ring  □ other: ___________________</td>
</tr>
<tr>
<td>□ None  □ Unknown/not assessed</td>
</tr>
<tr>
<td>Who initially performed CPR? □ supervisor  □ bystander</td>
</tr>
<tr>
<td>□ 9-1-1/EMS personnel</td>
</tr>
<tr>
<td>□ NA/CPR not performed  □ Unknown</td>
</tr>
<tr>
<td>□ other: ___________________</td>
</tr>
<tr>
<td>Did victim ever take swim lessons or water safety classes? □ Yes  □ No  □ Unknown</td>
</tr>
<tr>
<td>Victim Transported to: ___________________</td>
</tr>
<tr>
<td>Moribund: ___________________</td>
</tr>
<tr>
<td>DOA on Scene: ___________________</td>
</tr>
<tr>
<td>Reason: ___________________</td>
</tr>
</tbody>
</table>

| GPS Referral made: □ YES  □ NO Date: ___________________ |

FAX Completed Form to: (951) 358-7175, Injury Prevention Services
Questions? Call (951) 358 - 7471 ask for Vicki Young

Drowning Surveillance Handbook, California Chapter 4, American Academy of Pediatrics, June 2010 38
San Bernardino County 911 Submersion Incident System

In response to the large number of drownings in San Bernardino County, California in the 1990’s, the San Bernardino Drowning Prevention Network (DPN) was established with membership representing Safe Kids, law enforcement, fire, EMS, and public health agencies. Currently, there are about ten active members who meet monthly. They are involved in a number of prevention activities but have also developed a system to identify submersion incidents through the 911 system. A Response Team is made up of DPN members who volunteer days of the month to take “call.” A monthly calendar with who is on call and their phone number as well as guidelines for reporting submersion incidents is sent to the major 911 Communications Center for the county. (There are two 911 Communications Centers in the county.)

The Communications Center notifies the person on call (duty person) who provides them with incident information (city, age, location of incident, type of body of water) and the phone numbers of the responding fire department Duty Chief and Public Information Officer. After 20-30 minutes, the DPN duty person follows up with a phone call to get an update on the status of the submersion incident. The DPN duty person coordinates with the fire department about contacting the media. In addition, they encourage the fire department to send a SIRF (same type of form as that used in Riverside County) to the Safe Kids Inland Empire Coordinator at the Loma Linda University Medical Center who is also a member of DPN.
The DPN duty person also notifies the Safe Kids Coordinator by email of the incident who in turn coordinates necessary follow up to make sure the story went out and a SIRF report was filed. In addition, notebooks with the procedures, the tracking sheet, a calendar, and local statistics are provided for each member of the DPN Response Team.

The strengths of the San Bernardino County 911 Submersion Incident System are: a) there are individuals in the county committed to the issue of drowning prevention; b) the surveillance is coordinated through an existing 911 system; c) the process provides timely notification of incidents; and, d) public awareness is integrated into the surveillance functions.

Some of the challenges encountered with the system include: a) individuals must volunteer to take call; b) someone from EMS is required to establish rapport and work with the dispatch centers (911 Communications Centers); c) responsibility and commitment of someone to oversee the effort; and d) HIPAA restrictions may prohibit the release of information.

Contact: Kim Patrick, Safe Kids Inland Empire Coordinator
Loma Linda University Children's Hospital
909-558-8118
"Patrick, Kim" KPatrick@llu.edu
Child Drowning Surveillance in Central California

Each year a significant number of water related injuries occur in the Central Valley. Many of these children are treated at Children’s Hospital Central California, the primary pediatric referral center for California’s Central Valley. Since 1990, Children’s Hospital has been tracking these children both as inpatients and ED referrals. However, this system did not provide a reliable picture of the actual numbers of drowning events.

Therefore, in collaboration with the local EMS Agency (Central California EMS) the Pre-hospital Liaison Nurse at Children’s Hospital Central California has been the champion of drowning surveillance. The Nurse is notified of all drownings that occur within the four county EMS region via the electronic documentation system. These counties are Fresno, Madera, Kings, and Tulare.

Children’s Hospital participates as a member of multiple Pediatric Death Review committees. Details of any drowning incident involving a child who did not have an EMS ambulance response are captured in this forum.

Whenever a pediatric drowning is admitted to Children’s Hospital, the Pre-hospital Liaison Nurse is paged. The nurse calls for information which allows for follow-up the next business day.

Volunteers routinely review newspapers and online news outlets for local drowning victims. Few cases are detected by this review alone.
Data on these events are placed into an Access database for event information, as well as for patient outcome.

Every month at Central California EMS meetings, the Pre-hospital Liaison Nurse shares statistics with all participants which include personnel from Base Hospital Emergency Departments, Ambulance Providers, Emergency Preparedness personnel, and county officials. Children’s Hospital is also a member of the Water Safety Council of Fresno County and is the Lead Agency for the Central Valley Safe Kids Coalition. Up to date statistics are also shared at these meetings.

Limitations of current system: Underreporting. For the past five years Children’s Hospital has partnered with Fresno Unified School District to provide a water safety curriculum for first graders. As part of this program the children and their families complete a questionnaire. One of the questions asked is “Have you ever had a “scary water experience”?” Over 50 percent of families report they have. Also in many of the hospital’s injury prevention classes, similar experiences are related. None of these anecdotal family reports would be included in the data, although by definition they would be a drowning that was not fatal or did not necessarily require medical attention.

Contact: Mary Jo Quintero, R.N., P.L.N., Water Safety Program Coordinator
Children’s Hospital Central California
mquintero@childrenscentralcal.org
559.353.8661
Orange County – OCFA Child Immersion Incident System

As a result of an Orange County Grand Jury Inquiry in 2000-01,\textsuperscript{11} the Orange County Fire Authority (OCFA) established the OCFA Childhood Immersion Incident System. A special module (with variables similar to the Arizona and Riverside reporting forms) was developed for in-house use with the web-based National Fire Incident Reporting System (NFIRS). NFIRS is the standard national reporting system voluntarily used by U.S. fire departments to report fires and other incidents to which they respond and to maintain records of these incidents in a uniform manner.\textsuperscript{12}

A special computer program was written for the Orange County Fire Incident Reporting System (OCFIRS) that was incorporated into NFIRS. A Child Immersion form is automatically generated from the EMS/Patients tab on the Cover Data Entry page when the Precipitating Event is entered as “Drowning/Near Drowning” AND the patient’s age is entered as 16 or under. Once the criteria has been entered a “small child” icon will be displayed indicating that a Child Immersion Form has been generated. The Captain of the first engine responding to the scene is responsible for completing the on-line OCFIRS Report.

On a daily basis, OCFA submits NFIRS required data electronically to the national data center and reports cases of drowning to the Orange County Health Care Agency.

\textsuperscript{12} US Fire Administration, FEMA, National Fire Incident Reporting System http://www.usfa.dhs.gov/fireservice/nfirs/about.shtml
The strengths of the OC system are that it is timely because the data is entered daily; because it is computerized, it automatically identifies cases and branches to the appropriate data screens; and it is integrated into an existing system. The major limitation of the immersion system is that it only collects OCFA cases of child drownings and lacks data from city fire departments that do not contract with the OCFA (12 out of 34 cities in the county). In California, fewer than 1/3 of fire agencies report data to California Incident Reporting System (CAIRS) and NFIRS.

Contact: Lynnette Round

Community Relations/Education Supervisor

Orange County Fire Authority

(714) 573-6203

Round, Lynnette <LynnetteRound@ocfa.org>
Complete for immersion incident victims under 15 years of age.

| Victim's Name: |  
| Victim's Birthdate: |  
| Gender: Male Female |  
| Victim's Address: |  
| Incident Address: |  
| Race/Ethnicity: |  
| Parent's Language: |  
| Site: |  
| Caretaker at incident: |  
| Caretaker Location: |  
| Victim Last Seen: |  
| Swim Lessons: Has the victim taken swimming lessons in the last year? Yes No Unknown |  
| Missing: Estimated time victim was missing |  
| Disposition: |  
| Pool/Spa Location: |  
| Residence was: |  
| Business Present: |  
| Sliding door was open |  
| Sliding door was closed but unlatched or unlocked |  
| Hinged door was open |  
| Hinged door was closed but unlatched or unlocked |  
| Door alarm did not sound was disabled |  
| Isolation fence gate was propped open |  
| Isolation fence gate was closed but unlatched or unlocked |  
| Safety cover was off |  
| Victim was already inside isolation fencing |  
| Victim was already in water |  
| Other contributing conditions |  
| Floation Device: Victim was wearing a flotation device: Yes No Unknown |  
| If yes, describe: |  
| Resuscitation Attempt: Before you arrived, did anyone attempt to resuscitate the victim: Yes No Unknown |  
| If yes, Did the resuer have formal CPR training: Yes No Unknown |  

(save) (delete)
### OCFA Childhood Immersion Incident

**Complete for immersion incident victims under 15 years of age.**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victim's Name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim's Birthday</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Male, Female</td>
</tr>
<tr>
<td><strong>Victim's Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Incident Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Parent's Language</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Caretaker at Incident</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Caretaker Location</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim Last Seen</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Swim Lessons</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Has the victim taken swimming lessons in the last year?</strong></td>
<td>Yes, No, Unknown</td>
</tr>
<tr>
<td><strong>Missing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Estimated time victim was missing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Disposition</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pool/Spa Location</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Residence was</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Barricade Present</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Automatic pool cover</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Alarm on entry doors</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Safety net</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unknown</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim Access</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sliding door was open</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sliding door was closed but unlatched or unlocked</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hinged door was open</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hinged door was closed but unlatched or unlocked</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Door alarm did not sound or was disabled</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Isolation fence gate was propped open</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Isolation fence gate was closed but unlatched or unlocked</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Safety cover was off</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim was already inside isolation fencing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim was already in water</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other contributing conditions</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Rescue Device</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Victim was wearing a rescue device</strong></td>
<td>Yes, No, Unknown</td>
</tr>
<tr>
<td><strong>If yes, describe</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Resuscitation Attempt</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Before you arrived, did anyone attempt to resuscitate the victim?</strong></td>
<td>Yes, No, Unknown</td>
</tr>
<tr>
<td><strong>If yes, Did the rescuer have formal CPR training?</strong></td>
<td>Yes, No, Unknown</td>
</tr>
</tbody>
</table>

[save | delete |]
## OCFA Childhood Immersion Incident

Complete for immersion incident victims under 15 years of age.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victim's Name</td>
<td></td>
</tr>
<tr>
<td>Victim's Birthdate</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Victim's Address</td>
<td></td>
</tr>
<tr>
<td>Incident Address</td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Parent's Language</td>
<td></td>
</tr>
<tr>
<td>Site</td>
<td></td>
</tr>
<tr>
<td>Caretaker at Incident</td>
<td></td>
</tr>
<tr>
<td>Caretaker Location</td>
<td></td>
</tr>
<tr>
<td>Victim Last Seen</td>
<td></td>
</tr>
<tr>
<td>Swiss Lessons</td>
<td></td>
</tr>
<tr>
<td>Last swimming lessons in the last year?</td>
<td>Yes</td>
</tr>
<tr>
<td>Missing</td>
<td></td>
</tr>
<tr>
<td>Estimated time victim was missing</td>
<td></td>
</tr>
<tr>
<td>Disposition</td>
<td></td>
</tr>
<tr>
<td>Pool/Gym Location</td>
<td></td>
</tr>
<tr>
<td>Residence was</td>
<td></td>
</tr>
<tr>
<td>Barrier Present</td>
<td></td>
</tr>
<tr>
<td>Property line fence</td>
<td></td>
</tr>
<tr>
<td>4-sided isolation fence</td>
<td></td>
</tr>
<tr>
<td>Automatic pool cover</td>
<td></td>
</tr>
<tr>
<td>Alarm on exit doors</td>
<td></td>
</tr>
<tr>
<td>Safety gate</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Victim Access</td>
<td></td>
</tr>
<tr>
<td>Sliding door was open</td>
<td></td>
</tr>
<tr>
<td>Sliding door was closed but unlatched or unlocked</td>
<td></td>
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<tr>
<td>Hinged door was open</td>
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<td></td>
</tr>
<tr>
<td>Isolation fence gate was closed but unlatched or unlocked</td>
<td></td>
</tr>
<tr>
<td>Safety lock was off</td>
<td></td>
</tr>
<tr>
<td>Victim was already inside isolation fencing</td>
<td></td>
</tr>
<tr>
<td>Victim was already in water</td>
<td></td>
</tr>
<tr>
<td>Other contributing conditions</td>
<td></td>
</tr>
<tr>
<td>Flotation Device</td>
<td></td>
</tr>
<tr>
<td>Victim was wearing a Flotation device</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe</td>
<td></td>
</tr>
<tr>
<td>Resuscitation Attempt</td>
<td></td>
</tr>
<tr>
<td>Before you arrived, did anyone attempt to resuscitate the victim?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, did the resuscitation attempt have formal CPR training?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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Arizona – Water-Related Incidents in Maricopa County

In response to the fact that in the mid-1980s, the drowning death rate in Arizona preschoolers ranked first in the nation, the Drowning Prevention Coalition of Central Arizona was founded.\(^{13}\) Since 1988, the Arizona Department of Health Services (ADHS) has monitored water-related incidents, analyzed the data and prepared an annual report on water-related incidents in Maricopa County. A standardized form, Report of Drowning and Near-Drowning in Arizona, was developed and is used by fire departments to report incidents to the State Health Department. The fire departments usually are first on the scene of 911 calls and are generally able to provide information about the event from information provided by witnesses. The fire departments submit incident reports on a standard form (see next page). The reported data items include the age and gender of the victim, the location of the incident, and the apparent circumstances surrounding the event. The ADHS Bureau of Public Health Statistics receives and analyzes these case forms. Starting with the 2008 data the ADHS staff who enter data has been reduced to one person who receives and codes the forms of each reported incident. The surveillance system relies upon fire departments to report all the cases occurring within their jurisdictions.

The Arizona system is well designed and established; and has served as a model for other programs. This system has permitted the identification of trends and patterns. For example, through this surveillance system, they have found that a lapse in supervision was more prevalent for nonfatal incidents while the absence or inadequacy of barriers and gates was more often noted with deaths.

In conjunction with the Coalition, the surveillance system searches the local newspaper (the Arizona Republic) daily for reports of water-related incidents. When found, articles are clipped and attached to the fire department reports. Rarely, there is no associated fire department report. If a report is missing, then ADHS contacts the fire department to request a submission. If the fire departments do not submit a case report, then ADHS uses the information from the newspaper clipping to create a case report.

To determine outcomes, data from fire departments is supplemented with data from death certificates and other sources. Hospitals’ concerns about patient confidentiality make it difficult to document the outcome of cases that enter the medical care system. Confidential linkage to hospital discharge records allows assignment of an outcome status to many cases that the fire fighters are not able to follow up. This important step allows ADHS to determine the frequency of cases likely to have a serious impairment resulting from the incident.

Limitations of Incidence Data - Their surveillance system relies mainly upon voluntary reporting by fire departments and is subject to underreporting if they reduce their participation in submitting the report forms. The downturn in the economy and municipal revenues in 2008 and cutbacks in staff at fire departments clearly can affect the ability to report cases. The surveillance system assumes that few serious water-related incidents occur without the activation of the 911 system. In 2010, ADHS shifted the maintenance of the system to the fire departments.

Contact: Tim Flood, M.D.

Bureau Medical Director

Arizona Dept of Health Services
REPORT OF DROWNING OR NEAR-DROWNING IN ARIZONA – 2009

DATE OF INCIDENT (MM/DD/YY) : 
HOUR (24:00) : 
AGE (yrs) : 
SEX : 
INCIDENT #: 

FIRE DEPT. 

(REPORTING AGENCY) 

CITY OF INCIDENT: 
- Chandler 
- Gilbert 
- Glendale 
- Other 

RACE/ETHN: 
- Hispanic 
- White 
- Black 
- Other 

WATER TYPE: 
- Pool-in-ground 
- Pool-above-ground 
- Ocean 
- Lake 
- Other 

AT WHOSE HOME DID INCIDENT OCCUR: 
- Victim’s Home 
- Neighbors 
- Relative’s 
- Friend’s 
- Not at a home 

TYPE OF DWELLING OR FACILITY: 
- Single Home 
- Apt/Condo 
- Hotel/Motel 
- Other 

ATTIRE OF VICTIM: 
- Swimwear 
- None 
- Other Clothes 

PATIENT’S ACTIVITY AND LOCATION IMMEDIATELY PRIOR TO INCIDENT: 
- Swimming 
- Playing inside 
- Bathing 
- Playing outside 
- Other: 

CHILD SUPERVISION AT TIME OF INCIDENT: 
- Mother 
- Father 
- N/A 
- Other (Specify) 

SUPERVISOR’S ACTIVITY PRIOR TO INCIDENT: 
- Sleeping 
- Watching TV 
- On phone 
- Yard work 
- Housework 
- Other: 

STATUS OF PATIENT WHEN FOUND IN WATER: 
- Submerged 
- Floating 
- Struggling 
- Unknown 
- Other: 

RESCUER’S ACTIONS PRIOR TO FD ARRIVAL: 
- Chest compressions AND breaths (CPR) 
- Chest compressions only 
- Rescue breaths only 
- None attempted 
- Unknown 

ESTIMATED DURATION OF ANOXIA: 

RESPIRATORY EFFORT WHEN PULLED FROM WATER: 
- Present 
- Absent 

FOLLOW-UP & DATE PATIENT WAS LAST SEEN: 
- Died 
- Impairment: / / 
- Impairment: / / 

DESCRIPTION OF APPEARING CIRCUMSTANCES: 

For pool incidents at dwellings AND patient < 1 y/o: 

BARRIER IS IT PRESENT? 
- Fence between house and pool 
- Gates Self-Close with Latch 
- Doors W/ Properly 
- House Doors Self-Close with Latch 
- Doors W/ Properly 
- Pool Cover, Type: 
- Door or Window Alarm 

LIKELY Method of ACCESS TO POOL OR SPA: 
- Supervisor allowed child into pool or deck area 
- No barrier = child wandered in 
- Climbed (specify): 
- Child entered unsecured or propped gate 
- Other: 

DISPOSITION (if known): 
- D.O.A. 
- Transferred to: 
- Died in E.D. 
- Admitted 
- Treated as outpatient and released 
- Evaluated and left on-scene 

Fax completed forms to ADHS (602)-364-0052. Additional forms available www.azdhs.gov/phs/ptstats/med/ir/
Appendix 1.

Issues and Questions to Consider When Conducting Child Drowning Case Review

Data Sources
- Agencies that collected information at the scene
- Case notes, pictures and diagrams of scene

Child/Victim
- Age, Gender, Race/Ethnicity
- Home Address
- Date, time and place of death
- Medical History
- Activity and location of child when last seen
- Alone or playing with other children
- Length of time missing
- Type of clothing worn by victim when found
- Use of flotation device, type, Coast Guard approved?
- Specifics on how child gained access to pool/spa
- Previous risk behaviors (opening doors, etc)
- Swim ability, history of swim lessons

Supervisor/Supervision Information
- Intensity and level of supervision and by whom
- Primary person/s responsible for supervision of child
- Location of supervisor at time of incident
- Supervisor impaired, distracted and if so, how
- Supervisor drinking/using drugs
- Relationship to child, frequency of supervising child
- Language of supervisor/s
- Estimated time since child last seen by supervisor
- If child out of sight, where thought child was
- Issues related to multiple or child supervisors
- Supervisor knowledge of CPR
- Supervisor swim ability

Incident Information
- Date, Time and Address
- Site (i.e. child’s home, child care, community pool, etc)
- Type of dwelling (i.e. single family, apt, condo)
- Rental or HUD housing
- Length of time owner/leasee lived at address
- If not at child’s home, reason child at location
- # of adults/children at location when incident occurred
- Alcohol and/or drug use evident at time of event
- Unusual or special event or circumstances
- Antecedent activities relevant to incident

Water Source Information
- Type of pool/spa (in-ground, inflatable, attached)
- Water clarity, temperature
- If spa, water obscured by jet bubbles
- Drain entrapment
- Pool use day of incident, by whom
- How often did child use this pool/spa?
- Toys or other objects in water
- Other toys or objects near pool
- Year pool was built/remodeled
- History of code violations

Barrier / Access Information
- Property line fence, type, height, condition
- Direct access from house /garage to pool/spa?
- If fence between the house/garage and pool/spa, type, height, condition, partial or isolation
- Gates leading to pool/spa, type (self-closing, self-latching, open out,), position (open, closed), working condition
- If pool cover, type, in use
- Door/window alarms, type, functional, in use
- Other barriers/measures, condition and use
- Room from which child exited house
- Explain how victim got through barrier(s)/accessed pool

Family / Social History
- Household composition for child
- Language/s spoken
- Parents’ marital status
- If divorced or separated, extent of parent contact with child
- History of maltreatment, prior or open CAR
- Parent/supervisor substance abuse/criminal history

Emergency Response, Treatment and Outcomes
- Rescue equipment/phone near pool/spa
- Who found child and where
- Delay in pulling child from pool or initiating CPR
- Estimated time of submersion
- 911 called
- CPR by whom, know CPR
- Transport by whom
- Course of treatment, where and outcome
- Child Abuse Referral to CPS for this incident
- Follow-up actions taken by public agency, parents or pool owners after event?
Appendix 2.

National Guidelines for Records Needed For Child Death Review

Core Review for Every Death

• Death investigation reports, including scene reports, interviews, information on prior criminal activity.
• Autopsy reports.
• Medical and health information concerning the child, including birth records and health histories.
• Information on the social services provided to the family or child, including Women, Infants and Children (WIC), Family Planning and Child Protective Services.
• Information from court proceedings or other legal matters resulting from the death.
• Relevant family information, including siblings, biological and stepparents, extended family, living conditions, neighborhood, prior child deaths, etc.
• Information on the person(s) supervising the child at the time of death.
• Relevant information on the child’s educational experiences.

Reports for Drowning Reviews

• Autopsy reports.
• Scene investigation reports.
• EMS run reports.
• Prior CPS history on child, caregivers and persons supervising child at time of death.
• Names, ages and genders of other children in home.
• Information on zoning and code inspections and violations regarding pools or ponds.

---

Child Death Review Case Reporting System

Case Report 2.1

Effective January 2010

Instructions:

This data collection form is a component of the web-based CDR Case Reporting System. It can be used alone as a paper instrument, but its full potential is realized when the data from this form is entered into the CDR Case Reporting System. This system is available to states from the National Center for Child Death Review and requires a data use agreement for state and local data entry. System functions include data entry, case report reviewing and printing, data extraction and statistical reports.

The purpose of this form is to collect comprehensive information from multiple agencies participating in a child death review. The form documents the circumstances involved in the death, investigative actions, services provided or needed, key risk factors and actions recommended and/or taken by the CDR team to prevent future deaths.

While this data collection form is an important part of the child death review process, the form should not be the central focus of the review meeting. Experienced users have found that it works best to assign a person to record data while the team discussions are occurring. Persons should not attempt to answer every single question in a step-by-step manner as part of the team discussion. The form can be partially filled out before a meeting.

It is not expected that teams will have answers to all of the questions related to a death. However, over time teams begin understanding the importance of data collection and bring necessary information to the meeting. They find that the percentage of unknowns and unanswered questions decreases as the team becomes more familiar with the form.

The form contains three types of questions: (1) those that users should only select one response as represented by a circle; (2) those in which users can select several responses as represented by a square, and (3) those in which users enter text. This last type is depicted by “specify” or “describe”.

Most questions have a selection for unknown (UA). A question should be marked unknown if an attempt was made to find the answer, but no clear or satisfactory response was obtained. Questions should be left blank (unanswered) if no attempt was made to find the answer. "NA" stands for "Not Applicable" and should be used if the question is not applicable. For example, use "NA" for "level of education" if child is an infant.

This edition is Version 2.1, effective January 2010. Additional paper forms can be ordered from the National Center at no charge. Users interested in participating in the web-based case reporting system for data entry and reporting should contact the National Center for Child Death Review.

Phone: 1-800-656-0434  Email: info@childdeathreview.org  Website: www.childdeathreview.org  Data entry website: https://cordata.org/

This form was developed by a work group of over 26 persons, representing 18 states and the Maternal and Child Bureau of HRSA/HHS.

Copyright: National Center for Child Death Review Policy and Practice, January 2010
## Child Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td>UK</td>
</tr>
<tr>
<td>Date of Death</td>
<td>UK</td>
</tr>
<tr>
<td>Age:</td>
<td>Years, Months, Days, Hours, Minutes, Seconds</td>
</tr>
<tr>
<td>Race:</td>
<td>White, Black, Asian, Pacific Islander, American Indian, Alaskan Native, Native Hawaiian, Other, No, Yes, Unknown</td>
</tr>
<tr>
<td>Hispanic or Latino origin:</td>
<td>Male, Female, Unknown</td>
</tr>
<tr>
<td>Sex:</td>
<td>Male, Female, Unknown</td>
</tr>
<tr>
<td>Residence address:</td>
<td>Street, Apt, City, State, Zip</td>
</tr>
<tr>
<td>Residence overcrowded?</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Number of other children living</td>
<td>With child, UK</td>
</tr>
<tr>
<td>Children's weight</td>
<td>Pounds, Ounces</td>
</tr>
<tr>
<td>Children's height</td>
<td>Feet, Inches</td>
</tr>
<tr>
<td>Highest education level:</td>
<td>N/A, Drop out, None, High school graduate, Preschool, College, Grade K-8, Grade 9-12, Home schooled, Other, Unknown</td>
</tr>
<tr>
<td>Child's work status:</td>
<td>N/A, Employed, Full time, Part time, Unemployed, Not working, Other, Unknown</td>
</tr>
<tr>
<td>Did child have problems in school?</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Child's mental health (MH)</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Child had history of substance abuse?</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Child had history of child maltreatment?</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Child was ever placed outside of the home prior to this child's death?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child had a history of intimate partner violence?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child was ever placed outside of the home prior to this child's death?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child had a history of child maltreatment?</td>
<td>No, Yes, Unknown</td>
</tr>
<tr>
<td>Child spent time in juvenile detention?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child was in the care of the CPS?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child had a physical disability?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child had a mental disability?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child was ever placed outside of the home prior to this child's death?</td>
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</tr>
<tr>
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</tr>
<tr>
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<tr>
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<td>Child had a mental disability?</td>
<td>No, Yes, UK</td>
</tr>
<tr>
<td>Child was ever placed outside of the home prior to this child's death?</td>
<td>No, Yes, UK</td>
</tr>
</tbody>
</table>
### COMPLETE FOR ALL INFANTS UNDER ONE YEAR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>UK</td>
<td>No</td>
<td>Yes, UK</td>
</tr>
<tr>
<td>Grains</td>
<td>Pounds/bounds</td>
<td>No</td>
<td>Yes, # weeks</td>
</tr>
</tbody>
</table>

#### During pregnancy, did mother (check all that apply):
- [ ] Acute/Chronic Lung Disease
- [ ] Anemia
- [ ] Cardiac Disease
- [ ] Chronic Illness
- [ ] Diabetes
- [ ] Diabetes ketoacidosis (DKA)
- [ ] Diabetes insipidus (DI)
- [ ] Diabetes mellitus (DM)
- [ ] Diabetes mellitus, type 1
- [ ] Diabetes mellitus, type 2
- [ ] Diabetes mellitus, other
d- [ ] DKA
- [ ] DI
- [ ] DM
- [ ] DM, type 1
- [ ] DM, type 2
- [ ] DM, other
- [ ] Other, specify:
- [ ] # weeks
- [ ] # of prenatal visits: #
- [ ] Yes, month of 1st prenatal visit: #

#### 39. Were there access or compliance issues related to prenatal care?
- [ ] No
- [ ] Yes
- [ ] Lack of money for care
- [ ] Lack of transportation
- [ ] Religious objections to care
- [ ] Language barriers
- [ ] Lack of health insurance coverage
- [ ] Lack of language proficiency
- [ ] Health insurance not coordinated
- [ ] Referrals not made
- [ ] Disenrollment of health care system
- [ ] Special need, not available
- [ ] Language barrier
- [ ] Cultural differences
- [ ] Other, specify:

### PRIMARY CAREGIVER(S) INFORMATION

<table>
<thead>
<tr>
<th>1. Primary caregiver(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One:</td>
</tr>
<tr>
<td>Male:</td>
</tr>
<tr>
<td>2. Caregiver(s) age in years:</td>
</tr>
<tr>
<td>One:</td>
</tr>
<tr>
<td># Years:</td>
</tr>
<tr>
<td>3. Caregiver(s) sex:</td>
</tr>
<tr>
<td>One:</td>
</tr>
<tr>
<td>Male:</td>
</tr>
<tr>
<td>4. Caregiver(s) employment status:</td>
</tr>
<tr>
<td>One:</td>
</tr>
<tr>
<td>Employed:</td>
</tr>
<tr>
<td>5. Caregiver(s) education:</td>
</tr>
<tr>
<td>One:</td>
</tr>
<tr>
<td>High School:</td>
</tr>
</tbody>
</table>

#### 7. Does caregiver(s) speak English?
- [ ] Yes
- [ ] No
- [ ] UK

#### 8. Caregiver(s) on active military duty in the past twelve months?
- [ ] Yes
- [ ] No

#### 10. Caregiver(s) have history of alcohol abuse?
- [ ] Yes
- [ ] No
- [ ] UK

#### 11. Caregiver(s) have history of child maltreatment as victim?
- [ ] Yes
- [ ] No
- [ ] UK

#### 12. Caregiver(s) have history of child maltreatment as a perpetrator?
- [ ] Yes
- [ ] No
- [ ] UK

#### 13. Caregiver(s) have disability or chronic illness?
- [ ] Yes
- [ ] No
- [ ] UK
### C. SUPERVISOR INFORMATION

1. Did child have supervision at time of incident leading to death?
   - [ ] No, not needed given developmental age or circumstances, go to Sect D
   - [ ] Yes, able to determine, try to answer 3-15
   - [ ] Yes, answer 3-15

2. How long before incident did supervisor last see child? Select one:
   - [ ] On child in sight of supervisor
   - [ ] Minutes ______
   - [ ] Hours ______
   - [ ] Days ______

3. Is person a primary caregiver as listed in previous section?
   - [ ] No
   - [ ] Yes, caregiver one, go to 15
   - [ ] Yes, caregiver two, go to 15

4. Primary person responsible for supervision? Select only one:
   - [ ] Biological parent
   - [ ] Adoptive parent
   - [ ] Godparent
   - [ ] Foster parent
   - [ ] Other, specify:

5. Supervisor’s age in years:
   - [ ] Other relative

6. Supervisor’s sex:
   - [ ] Male
   - [ ] Female

7. Does supervisor speak English?
   - [ ] No
   - [ ] Yes

8. Supervisor on active military duty?
   - [ ] No
   - [ ] Yes

9. Supervisor has substance abuse history?
   - [ ] No
   - [ ] Yes

10. Supervisor has history of child maltreatment? Select only one:
    - [ ] As Victim
    - [ ] As Perpetrator

11. Supervisor has disability or chronic illness?
    - [ ] No
    - [ ] Yes

12. Supervisor has prior child deaths?
    - [ ] No
    - [ ] Yes

13. Supervisor has history of intimate partner violence?
    - [ ] No
    - [ ] Yes

14. Supervisor has delinquent or criminal history?
    - [ ] No
    - [ ] Yes

15. At time of incident was supervisor impaired?
    - [ ] No
    - [ ] Yes

### D. INCIDENT INFORMATION

1. Date of incident event:
   - [ ] Same as date of death
   - [ ] If different than date of death: __/__/____
   - [ ] Day

2. Approximate time of day incident occurred:
   - [ ] AM
   - [ ] PM
   - [ ] Hours ______
   - [ ] Minutes ______

3. Interval between incident and death:
   - [ ] Weeks ______
   - [ ] Days ______
   - [ ] Years ______
4. Place of incident, check all that apply:
- Child's home
- Relative's home
- Friends' home
- Licensed foster care home
- Licensed child care home
- Unlicensed child care home
- School
- Sidewalk
- Sports area
- Street
- Park
- School
- Other, specify:
- Farm
- Relative foster care home
- Jail/penitentiary facility
- State or county park

5. Type of area:
- Urban
- Suburban
- Rural
- Frontier

6. Incident state:
- 511 or 911 local emergency number called?
- Yes
- No
- NA

7. Incident county:
- Yes
- No
- NA
- UK

8. CPR performed before EMS arrived?
- Yes
- No
- NA

9. At time of incident leading to death, had child used alcohol or drugs?
- Yes
- No
- NA
- UK

10. Children activity at time of incident, check all that apply:
- Sleeping
- Playing
- Working
- Eating
- Driving/vehicle occupant

11. EMT to scene?
- Yes
- No
- NA
- UK

12. Total number of deaths at incident event:
- Children ages 0-19
- Adults

E. INVESTIGATION INFORMATION

1. Death referred to:
- Medical examiner
- Coroner
- Not referred
- UK

2. Person declaring official cause of death:
- Medical examiner
- Coroner
- Hospital physician
- Morician
- Other, specify:

3. Autopsy performed?
- Yes
- No
- NA
- UK

4. Agencies that conducted a scene investigation, check all that apply:
- Not conducted
- Fire investigator
- Medical examiner
- Coroner
- Child Protective Services
- Other, specify:

5. Toxology screen?
- Negative
- Marijuana
- Too high prescription drug, specify:
- Alcohol
- Methamphetamine
- Too high illegal street drug, specify:

6. X-rays taken?
- Yes
- No
- NA
- UK

7. Was a CPR record checked conducted as a result of death?
- Yes
- No

8. Did investigation find evidence of prior abuse?
- Yes
- No
- NA
- UK

9. GPS active taken because of death?
- Yes
- No
- NA
- UK

10. If death occurred in a licensed setting, indicate the action taken:
- No action
- License suspended
- License revoked

F. OFFICIAL MANNER AND PRIMARY CAUSE OF DEATH

1. Official manner of death from the death certificate:
- Natural
- Accident
- Suicide
- Homicide
- Undetermined
- Fasting
- UK

2. Primary cause of death: Choose only 1 of the 4 major categories, then a specific cause. For pending, choose most likely cause.
- Motor vehicle and other transport, go to G1
- Fire, burn, or electrocution, go to G2
- Drowning, go to G3
- Asphyxia, go to G4
- Selective use of body part, go to G5
- Inhibit bite or attack, go to G7
- Fall or crush, go to G8
- Poisoning, overdose, or acute intoxication, go to G9
- Exposure, go to G10
- Undetermined, if under age one, go to G5 and G12
- Other cause, go to G12
- Unknown, go to G12

3. From a medical cause, select one:
- Asthma, go to G11
- Cancer, go to G11
- Cardiovascular, go to G11
- Congenital anomaly, go to G11
- HIV/AIDS, go to G11
- Influenza, go to G11
- Malnutrition, go to G11
- Maternal/postpartum, go to G11
- Maternal conditions, go to G11
- Other medical condition, go to G11
- Other, go to G11

4. From an injury or unknown:
- Medical treatment, go to G11
- Unintentional, go to G11
- Other, go to G11

5. From an injury:
- Motor vehicle and other transport, go to G11
- Fire, burn, or electrocution, go to G2
- Drowning, go to G3
- Asphyxia, go to G4
- Selective use of body part, go to G5
- Inhibit bite or attack, go to G7
- Fall or crush, go to G8
- Poisoning, overdose, or acute intoxication, go to G9
- Exposure, go to G10
- Undetermined, if under age one, go to G5 and G12
- Other cause, go to G12
- Unknown, go to G12

6. From a medical cause:
- Asthma, go to G11
- Cancer, go to G11
- Cardiovascular, go to G11
- Congenital anomaly, go to G11
- HIV/AIDS, go to G11
- Influenza, go to G11
- Malnutrition, go to G11
- Maternal/postpartum, go to G11
- Maternal conditions, go to G11
- Other medical condition, go to G11
- Other, go to G11

7. From an injury or unknown:
- Medical treatment, go to G11
- Unintentional, go to G11
- Other, go to G11

### C. Detailed Information by Cause of Death: Choose One Section Only, That Is Same as the Cause Selected Above

#### 8. Motor Vehicle and Other Transport

<table>
<thead>
<tr>
<th>Total Number of Vehicles:</th>
<th>Location of Incident: Check All That Apply:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s Other Primary Vehicle</td>
<td>1. Street, check all that apply:</td>
</tr>
<tr>
<td>· Driver</td>
<td>· Residential street</td>
</tr>
<tr>
<td>· Passenger</td>
<td>· Rural road</td>
</tr>
<tr>
<td>· Front seat</td>
<td>· Off road</td>
</tr>
<tr>
<td>· Back over</td>
<td>· Highway</td>
</tr>
<tr>
<td>· Back over</td>
<td>· Railroad crossing tracks</td>
</tr>
<tr>
<td>· Back over</td>
<td>· Intervenues</td>
</tr>
<tr>
<td>· Back over</td>
<td>· U-turn</td>
</tr>
<tr>
<td>· Roll over</td>
<td>· Shoulder</td>
</tr>
<tr>
<td>· Back over</td>
<td>· Sidewalk</td>
</tr>
<tr>
<td>· Back over</td>
<td>· UK</td>
</tr>
<tr>
<td>· Back over</td>
<td></td>
</tr>
<tr>
<td>· Other, specify:</td>
<td></td>
</tr>
</tbody>
</table>

**Child as Driver**

- [ ] Age of driver
- [ ] Responsible for causing incident
- [ ] Has alcohol in system
- [ ] Has no license
- [ ] Has a license
- [ ] Has a valid license
- [ ] Has a suspended license
- [ ] Has a license that has been restricted
- [ ] Was violating graduated licensing rules
- [ ] Nighttime driving cutoff
- [ ] Passenger restrictions
- [ ] Driving without required supervision
- [ ] Other violations, specify:

<table>
<thead>
<tr>
<th>Risk Factors for Child (Select one option per row):</th>
<th>Need</th>
<th>Need</th>
<th>Band</th>
<th>Band</th>
<th>Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult seat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lap belt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder belt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child seat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belt positioning booster seat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pretend Use of Lap Belt:***

- [ ] Child seat: type
- [ ] Front facing
- [ ] Rear facing
- [ ] UK

---

Child Drowning Surveillance Handbook, California Chapter 4, American Academy of Pediatrics, June 2010  59
### 2. FIRE, BURN, or ELECTROCUTION

<table>
<thead>
<tr>
<th>a. Ignition, heat or electrocution source:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Matches</td>
</tr>
<tr>
<td>☐ Reel of cord</td>
</tr>
<tr>
<td>☐ Burner</td>
</tr>
<tr>
<td>☐ Electrical outlet</td>
</tr>
<tr>
<td>☐ Other, specify:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Type of incident:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Fire, go to:</td>
</tr>
<tr>
<td>☐ Electrical, go to:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. For fire, child died from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Burns</td>
</tr>
<tr>
<td>☐ Electrical burn</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Manner first ignited:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Clothing fire</td>
</tr>
<tr>
<td>☐ Mattress</td>
</tr>
<tr>
<td>☐ Christmas tree</td>
</tr>
<tr>
<td>☐ Clothing</td>
</tr>
<tr>
<td>☐ Apartment</td>
</tr>
<tr>
<td>☐ Other, specify:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Type of building on fire:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Single story</td>
</tr>
<tr>
<td>☐ Multi-story</td>
</tr>
<tr>
<td>☐ Other, specify:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. Building materials used:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Wood</td>
</tr>
<tr>
<td>☐ Brick</td>
</tr>
<tr>
<td>☐ Other, specify:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g. Fire started by a person?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ No</td>
</tr>
<tr>
<td>☐ Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>h. Did anyone attempt to put out fire?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ No</td>
</tr>
<tr>
<td>☐ Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i. Was there a history of setting fires?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ No</td>
</tr>
<tr>
<td>☐ Yes</td>
</tr>
</tbody>
</table>

### 3. DROWNING

<table>
<thead>
<tr>
<th>a. Where was child last seen before drowning?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ In water</td>
</tr>
<tr>
<td>☐ In yard</td>
</tr>
<tr>
<td>☐ On shore</td>
</tr>
<tr>
<td>☐ On dock</td>
</tr>
<tr>
<td>☐ Other, specify:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. What was child last seen doing before drowning?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Playing</td>
</tr>
<tr>
<td>☐ Tubing</td>
</tr>
<tr>
<td>☐ Boating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Was child forcibly submerged?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Drowning location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Pool, hot tub, spa, go to:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. For open water, pace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Rowing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. For open water, contributing factors:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Weather</td>
</tr>
<tr>
<td>☐ Drop off</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g. If boating, type of boat:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Jet ski</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>h. For boating, was the child piloting boat?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Yes</td>
</tr>
<tr>
<td>☐ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i. For pool, child found:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ In pool, hot tub, spa</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>j. For pool, ownership:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Private</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>k. Length of time owner had pool/hot tub/spa:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ NA</td>
</tr>
<tr>
<td>☐ 1-5 yr</td>
</tr>
<tr>
<td>☐ 6+ yr</td>
</tr>
</tbody>
</table>
### Child Drowning Surveillance Handbook, California Chapter 4, American Academy of Pediatrics, June 2010

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>F Worksheet for Fatal Drowning Case Investigations (cont.)</td>
</tr>
<tr>
<td>2.</td>
<td>SIDS and Undetermined Cause Under One Year of Age (cont.)</td>
</tr>
<tr>
<td>3.</td>
<td>A Risk Factors and Drowning Risk Factors (cont.)</td>
</tr>
<tr>
<td>4.</td>
<td>ABC/RESUSCITATION (cont.)</td>
</tr>
<tr>
<td>5.</td>
<td>Recommended Equipment (cont.)</td>
</tr>
</tbody>
</table>

#### Section 1: F Worksheet for Fatal Drowning Case Investigations (cont.)

**a.** Report of police or coroner?

#### Section 2: SIDS and Undetermined Cause Under One Year of Age (cont.)

**a.** Child exposed to second-hand smoke?

**b.** Child overheated?

**c.** History of seizures?

**d.** History of accidents?

#### Section 3: A Risk Factors and Drowning Risk Factors (cont.)

**a.** Parental risk factors?

**b.** Other family history?

#### Section 4: ABC/RESUSCITATION (cont.)

**a.** Type of event?

**b.** Is the child breathing adequately?

**c.** Is the child constricted or obstructed?

**d.** Was the child participating in water play?

#### Section 5: Recommended Equipment (cont.)

**a.** What kind of equipment was used?

**b.** What kind of barriers were used?

**c.** What kind of equipment was found at the scene?

**d.** What kind of equipment was found in the home?

---

**Note:** The table and sections continue with detailed questions and responses for various aspects of drowning surveillance and investigation.
6. WEAPON, INCLUDING PERSON’S BODY PART

| a. Type of weapon: | b. For firearms, type: | c. Firearm licensed? | d. Firearm safety features, check all that apply: | e. Where was firearm stored? | f. Firearm stored with  
|-------------------|-----------------------|---------------------|---------------------------------|--------------------------|-------------------|  with ammunition? |
| ☐ Rifle, go to l  | ☐ Long gun             | ☐ Yes               | ☐ Trigger lock                  | ☐ Not stored            | ☐ No              | ☐ Yes            |
| ☐ Shotgun, go to l| ☐ Short gun            | ☐ No                | ☐ Magazine disconnect           | ☐ Under mattress/pillow | ☐ Yes             | ☐ No             |
| ☐ Long firearm, go to l | ☐ Hunting rifle       | ☐ UK                | ☐ Firearm safety features       | ☐ Locked cabinet        | ☐ No              | ☐ Yes            |
| ☐ Short firearm, go to l | ☐ Assault rifle       | ☐ Other             | ☐ Other, specify                | ☐ Unlocked cabinet      | ☐ Yes             | ☐ No             |
| ☐ Other, specify/and go to l | ☐ Air rifle          | ☐ Yes               | ☐ Other, specify                | ☐ Glove compartment     | ☐ Yes             | ☐ No             |
| ☐ UK, go to m      | ☐ Air rifle           | ☐ No                | ☐ Other, specify                | ■ UK                    | ■ UK              | ■ UK             |

6a. Owner of fatal firearm:
- ☐ UK
- ☐ Weapon stolen
- ☐ UK, weapon loaned
- ☐ Self
- ☐ Spouse
- ☐ Biological parent
- ☐ Other relative
- ☐ School employee
- ☐ Adoptive parent
- ☐ Friend
- ☐ Stranger
- ☐ Robber
- ☐ Domestic partner
- ☐ Child’s boyfriend/girlfriend
- ☐ Other, specify:
  - ☐ Other relative
  - ☐ Close friend or neighbor
  - ☐ UK

6b. Type of sharp object:
- ☐ Kitchen knife
- ☐ Saw
- ☐ Pocketknife
- ☐ Screwdriver
- ☐ Clawhammer
- ☐ Hunting knife
- ☐ Razor
- ☐ Rock
- ☐ Other, specify:
  - ☐ Other, specify:
  - ☐ UK

6c. Type of blunt object:
- ☐ Bat
- ☐ Club
- ☐ Hammer
- ☐ Other, specify:
  - ☐ Other, specify:
  - ☐ UK

6d. What was person’s body part? Check all that apply:
- ☐ Head, kick or punch
- ☐ Cut
- ☐ Edged
- ☐ Crush
- ☐ Other, specify:
  - ☐ Yes, describe circumstances:
  - ☐ UK

6e. Use of weapon at time, check all that apply:
- ☐ Self-defense
- ☐ Assault
- ☐ Aggravated
- ☐ Intimate partner violence
- ☐ Domestic violence
- ☐ Other, specify:
  - ☐ UK

7. ANIMAL BITE OR ATTACK

<table>
<thead>
<tr>
<th>a. Type of animal:</th>
<th>b. Animal access to child, check all that apply:</th>
<th>c. Did child provoke animal?</th>
<th>d. Did child provide animal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Domesticated dog</td>
<td>☐ Dog on leash</td>
<td>☐ No or Yes UK</td>
<td>No or Yes UK</td>
</tr>
<tr>
<td>☐ Insect</td>
<td>☐ Animal escaped from cage or leash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Domesticated cat</td>
<td>☐ Animal or muzzle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Other, specify:</td>
<td>☐ Animal or muzzle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Wind animal,</td>
<td>☐ Animal or muzzle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Other, specify:</td>
<td>☐ Child reached it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ UK</td>
<td>☐ Child entered animal area</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. FALL OR CRUSH

<table>
<thead>
<tr>
<th>a. Fall, go to b</th>
<th>b. Height or length:</th>
<th>c. Under what:</th>
<th>d. Did child provoke animal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Fall, go to b</td>
<td>☐ Height, inches</td>
<td>☐ Yes, specify:</td>
<td>No or Yes UK</td>
</tr>
<tr>
<td>☐ Crush, go to h</td>
<td>☐ UK</td>
<td>☐ Yes, specify:</td>
<td>No or Yes UK</td>
</tr>
</tbody>
</table>

8a. Under what:
- ☐ Open window
- ☐ Natural elevation
- ☐ Stairs/steps
- ☐ Moving object, specify:
  - ☐ Animal, specify:
9. POISONING, OVERTDOSE OR ACUTE INTOXICATION

<table>
<thead>
<tr>
<th>Prescription drug</th>
<th>Over the counter drug</th>
<th>Cosmetics/personal care products</th>
<th>Other substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antidepressant</td>
<td>Diet pills</td>
<td>Cosmetics/personal care products</td>
<td>Plants</td>
</tr>
<tr>
<td>Blood pressure medication</td>
<td>Stimulants</td>
<td></td>
<td>Alcohol</td>
</tr>
<tr>
<td>Pain killer (opiate)</td>
<td>Cough medicine</td>
<td></td>
<td>Street drugs</td>
</tr>
<tr>
<td>Pain killer (non-opiate)</td>
<td>Pain medication</td>
<td></td>
<td>Anabolic</td>
</tr>
<tr>
<td>Methadone</td>
<td>Children’s vitamins</td>
<td></td>
<td>Other chemical</td>
</tr>
<tr>
<td>Cardiac medication</td>
<td>Iron supplement</td>
<td></td>
<td>Herbal remedy</td>
</tr>
<tr>
<td>Other, specify:</td>
<td>Other vitamins</td>
<td></td>
<td>Other, specify:</td>
</tr>
<tr>
<td></td>
<td>Other, specify:</td>
<td></td>
<td>Other, specify:</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Where was the substance stored?

- Open area
- Open cabinet
- Closed cabinet, unlocked
- Closed cabinet, locked
- Other, specify:
- UK

7. Was the product in its original container?

- Yes
- No
- UK

8. Was the incident the result of:

- Accidental overdose
- Medical treatment mishap
- Adverse effect, but not overdose
- Deliberate poisoning
- Acute intoxication
- Other, specify:
- UK

9. Was Poison Control called?

- Yes
- No
- UK

10. EXPOSURE

a. Circumstances, check all that apply:

- Abandonment
- Lost outdoors
- Left in car
- Illegal border crossing
- Left in room
- Other, specify:
- UK

b. Condition of exposure:

- Hypothermia
- Hypothermia
- UK

11. MEDICAL CONDITION

a. Was child receiving health care for the medical condition?

- Yes
- No
- UK

b. Were the prescribed care plans appropriate for the medical condition?

- N/A
- No
- Yes
- Other, specify:
- UK

c. Was child up to date with American Academy of Pediatrics immunization schedule?

- Yes
- N/A
- Other, specify:
- UK

d. Was medical condition associated with a drowning?

- Yes
- No
- UK
### Chapter 4 - Other Circumstances of Incident - Answer Relevant Sections

1. **Was Death Related to Sleeping or the Sleep Environment?**
   - **a. Incident sleep place:**
     - **If adult bed, what type?**
       - Twin
       - Full
       - Queen
       - King
       - Other, specify:
       - UK
     - **If crib, what type?**
       - On back
       - On stomach
       - On side
       - UK
   - **b. Child put to sleep:**
     - On back
     - On stomach
     - On side
     - UK
   - **c. Child found:**
     - On back
     - On stomach
     - On side
     - UK

2. **Child in a new or different environment than usual?**
   - No
   - Yes
   - UK (If yes, specify)

3. **Child last placed to sleep with a pacifier?**
   - No
   - Yes
   - UK

4. **Was a fan/using in the room at the time of death?**
   - No
   - Yes
   - UK (If yes, specify)

5. **Circumstances when child found:**
   - Unobstructed by person or object
   - Partially obstructed by person or object
   - UK

6. **Child position most relevant to death:**
   - On top of
   - Under
   - Between
   - Wedged into
   - Pressed into
   - Fei or rolled onto
   - Tangled in
   - Other, specify:
   - UK

7. **With what objects or persons, check all that apply:**
   - Adult(s)
   - Child(ren)
   - Animal(s)
   - Bumper pads
   - Plastic bag
   - Blanket
   - Chair, type:
   - Pillow
   - Other, specify:
   - UK

8. **Caregiver/supervisor fell asleep while feeding child?**
   - No
   - Yes
   - UK

9. **Child sleeping in the same room as caregiver/supervisor at time of death?**
   - No
   - Yes
   - UK

10. **Child sleeping on same surface with person(s) or animal(s)?**
    - No
    - Yes
    - UK

11. **Was Consumer Product Safety Commission (CPSC) notified?**
    - No
    - Yes
    - UK

---

**Note:** The above table is a portion of a larger form used for child drowning surveillance in California, as outlined in the Child Drowning Surveillance Handbook, California Chapter 4, American Academy of Pediatrics, June 2010.
### E. ACTS OF OMISSION OR COMMISSION INCLUDING POOR SUPERVISION, CHILD ABUSE & NEGLECT, ASSAULTS, AND SUICIDE

#### Type of Act

1. Did any act(s) of omission or commission cause and/or contribute to the death?  
   - [ ] No  
   - [ ] Yes  
   - [ ] UK

   **If yes**, proceed to Section J

2. What act(s) contributed to the death? (Check only one per column.)
   - [ ] Unintentional
   - [ ] Intentional
   - [ ] Undetermined Intent
   - [ ] UK

3. Was the act(s) check only one per column.
   - [ ] Did not contribute
   - [ ] Contributed

   **If yes**, go to Section J

4. Was the act(s) either or both?
   - The direct cause of death
   - The contributing cause of death

5. Did any act(s) of omission or commission cause and/or contribute to the death?  
   - [ ] Yes  
   - [ ] No  
   - [ ] UK

6. Other acts and/or contributing causes (if applicable), specify:
   - [ ] Failure to protect from hazards, specify:
   - [ ] Failure to seek/treat
   - [ ] Failure to provide necessities

7. Child abuse, type. Check all that apply
   - Physical, go to 5
   - Emotional, specify and go to 11
   - Sexual, specify and go to 11
   - UK, go to 11

8. Physical abuse, check all that apply
   - Abusive head trauma, go to 6
   - Chronic Battered Child Syndrome, go to 9
   - Measuring or striking, go to 7
   - Neglect or starvation, go to 8
   - Other, specify and go to 9
   - UK, go to 8

#### Person(s) Responsible

9. Is person the caregiver or supervisor in previous section?  
   - [ ] Yes  
   - [ ] No  
   - [ ] UK

10. Primary person responsible for act(s) that caused and/or contributed to death.
    - Select no more than one person for caused and one person for contributed.

11. Date of birth (if known), specify:
   - [ ] Birth
   - [ ] Other, specify:

12. Person’s sex:
   - [ ] Male
   - [ ] Female
   - [ ] UK

13. Does person speak English?
   - [ ] Yes
   - [ ] No
   - [ ] UK

14. Person in active military duty?
   - [ ] Yes
   - [ ] No
   - [ ] UK

15. Person’s age:
   - [ ] UK

16. Person’s name:
   - [ ] Male
   - [ ] Female
   - [ ] UK

17. Other, specify:
   - [ ] Yes
   - [ ] No
   - [ ] UK

18. If yes, specify branch:
   - [ ] UK
16. Person have history of substance abuse?
   - Yes
   - No
   - UK
   - Other, specify:

19. Person have history of child maltreatment as a victim?
   - Yes
   - No
   - UK
   - Other, specify:

20. Person have history of child maltreatment as a perpetrator?
   - Yes
   - No
   - UK
   - Other, specify:

21. Person have disability or chronic illness?
   - Yes
   - No
   - UK
   - Other, specify:

22. Person have prior severe behavior?
   - Yes
   - No
   - UK
   - Other, specify:

23. Person have history of intimate partner violence?
   - Yes
   - No
   - UK
   - Other, specify:

24. Person have delinquent/criminal history?
   - Yes
   - No
   - UK
   - Other, specify:

25. At time of incident was person, check all that apply?
   - Drunk impaired?
   - Alcohol impaired?
   - Addicted?
   - Impaired by illness? Specify:
   - Impaired by disability? Specify:

26. Does person have, check all that apply?
   - Prior history of similar acts?
   - Prior arrests?
   - Prior convictions?

27. Legal outcomes in this death, check all that apply?
   - No charges filed
   - Charges filed pending
   - Charges filed, specify:
   - Plea, specify:
   - Guilty verdict, specify:
   - Other, specify:

28. For suicide, select yes, no or uk for each question. Describe answers in narrative.

29. For suicide, was there a history of acute or cumulative personal crisis that may have contributed to the child's despondency? Check all that apply:
   - None known
   - Physical abuse/assault
   - Family discord
   - Parental divorce/separation
   - Prior suicide threats were made?
   - Attempt was made?
   - Suicide completely unexpected?
   - Child had a history of running away?
   - Child had a history of self-mutilation?
   - Suicide was completely unexpected?
   - There is a family history of suicide?
   - Suicide was part of a murder-suicide?
   - Suicide was part of a suicide pact?
   - Suicide was part of a suicide cluster?
### J. SERVICES TO FAMILY AND COMMUNITY AS A RESULT OF DEATH

<table>
<thead>
<tr>
<th>Services</th>
<th>Provider</th>
<th>Offered but</th>
<th>Offered but</th>
<th>Should be</th>
<th>Needed but</th>
<th>CDRReview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bereavement counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funeral arrangements</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Grieving support</td>
<td></td>
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<td></td>
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<tr>
<td>Mental health services</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foster care</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Health care</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Urgent services</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### K. PREVENTION INITIATIVES RESULTING FROM THE REVIEW

1. Could the death have been prevented?  
   - [ ] No, probably not  
   - [ ] Yes, probably  
   - [ ] Team could not determine

2. What specific recommendations and/or initiatives resulted from the review? Check all that apply:  
   - [ ] No recommendations made; go to Section L

#### Current Action Stage

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Current</th>
<th>Planned</th>
<th>Impacted</th>
</tr>
</thead>
</table>

#### Type of Action

<table>
<thead>
<tr>
<th>Current</th>
<th>Planned</th>
<th>Impacted</th>
</tr>
</thead>
</table>

#### Level of Action

<table>
<thead>
<tr>
<th>Current</th>
<th>Planned</th>
<th>Impacted</th>
</tr>
</thead>
</table>

Briefly describe the initiatives:

3. Who took responsibility for championing the prevention initiatives? Check all that apply:
   - [ ] N/A, no strategies  
   - [ ] Mental health  
   - [ ] Law enforcement  
   - [ ] Advocacy organization  
   - [ ] Other, specify:
     - [ ] No one  
     - [ ] Schools  
     - [ ] Medical examiner  
     - [ ] Local community group  
     - [ ] Health department  
     - [ ] Hospital  
     - [ ] Other health care providers  
     - [ ] Other, specify:
     - [ ] Health care providers  
     - [ ] Elected official  
     - [ ] Youth group  
     - [ ] UK
I. THE REVIEW MEETING PROCESS

1. Date of first review meeting: 
2. Number of review meetings for this case: 
3. Is review complete? □ No □ Yes

A. Agencies involved, check all that apply:
- Medical examiner/doctor of forensic medicine
- CPS
- Other health agency
- Mental health
- Other, list:
- Law enforcement
- Other social services
- Fire
- Substance abuse
- Probation/parole officer
- Other, list:
- Prosecutors/district attorney
- Physician
- EMS
- Court
- Attorney
- Other, list:
- Social worker
- Hospital
- Other, list:

B. Factors that prevented an effective review, check all that apply:
- Confidentiality issues among members prevented full exchange of information.
- HIPAA regulations prevented access to or exchange of information.
- Inadequate investigation/poor record keeping/missing information for most.
- Team members did not bring adequate information to the meeting.
- Meeting was not held soon enough after death.
- Meeting was held too long after death.
- Records or information were needed from another local jurisdiction.
- Records or information were needed from another state.
- Team disagreed on circumstances.
- Other factors, specify:

C. Review meeting outcomes, check all that apply:
- Review led to additional investigation.
- Team disagreed on official manner of death.
  - What did team believe cause of death should be?
- Because of the review, the official cause or manner of death was changed.
- Review to changes in agency policies or practices.
- Review led to prevention initiative being implemented.

II. NARRATIVE

Use this space to provide more detail on the circumstances of the death, and to describe any other relevant information. Typically include timeline in this narrative.

Continue narrative if necessary on back page

III. FORM COMPLETED BY:

PERSON: 
TITLE: 
AGENCY: 
PHONE: 
EMAIL: 
DATE COMPLETED: 
DATA ENTRY COMPLETED FOR THIS CASE: □