Child maltreatment deaths are among the most tragic events in our society. In July 2013, the *Army Times* published an article entitled, “The Army’s Hidden Child Abuse Epidemic.” This article reported the numbers and rates per 100,000 of children who suffered abuse or neglect and also child death rates as the result of maltreatment. In this issue of *Joining Forces Joining Families*, we expand on the topic of child maltreatment deaths: in the Army, in the U.S. population, and the worldwide problem of child mortality. Our interview is with Dr. Rene Robichaux, the Family Advocacy Program Manager at the U.S. Army Medical Command, who was also interviewed by the *Army Times*. Here, we present his comments and analyses of child maltreatment fatalities including the Army responses to child maltreatment deaths. As a part of our reports on child maltreatment fatalities, we provide a list of major risk factors identified by child death reviews. Other features include a brief report on children’s concerns reported to helplines and a sample of scientific articles on child maltreatment fatalities. As always, we appreciate the work of our readership, and wish you a productive and healthy 2014.

**Featured Interview**

**Child Maltreatment Fatalities: U.S. Army Responses**

*An Interview with Rene Robichaux, PhD*

*Rene Robichaux, PhD*

Dr. Robichaux is the U. S. Army’s Family Advocacy Program Manager and Social Work Programs Manager at the Army Medical Command in San Antonio, Texas. He received his doctorate at the National Catholic School of Social Service, Catholic University, Washington, DC. He is certified by the American Board of Social Workers by the National Association of Social Workers as a Diplomate in Clinical Social Work. He maintains a wide variety of teaching appointments and has numerous presentations and publications to his credit. He served a full career in the U.S. Army as a social worker and retired as a colonel.

**In This Issue**

Child maltreatment deaths are among the most tragic events in our society. In July 2013, the *Army Times* published an article entitled, “The Army’s Hidden Child Abuse Epidemic.” This article reported the numbers and rates per 100,000 of children who suffered abuse or neglect and also child death rates as the result of maltreatment. In this issue of *Joining Forces Joining Families*, we expand on the topic of child maltreatment deaths: in the Army, in the U.S. population, and the worldwide problem of child mortality. Our interview is with Dr. Rene Robichaux, the Family Advocacy Program Manager at the U.S. Army Medical Command, who was also interviewed by the *Army Times*. Here, we present his comments and analyses of child maltreatment fatalities including the Army responses to child maltreatment deaths. As a part of our reports on child maltreatment fatalities, we provide a list of major risk factors identified by child death reviews. Other features include a brief report on children’s concerns reported to helplines and a sample of scientific articles on child maltreatment fatalities. As always, we appreciate the work of our readership, and wish you a productive and healthy 2014.

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**Dr. McCarroll:** As the Family Advocacy Program Manager at the Army Medical Command (MEDCOM), responsible for the clinical aspects of FAP intervention, you have a major role in helping the Army prevent child maltreatment fatalities. What is the recent history of these fatalities?

Dr. Robichaux: In 2009, there were 11 child fatalities and the rate was 2.14/100,000. In 2010, there were 13 and rate was 2.45/100,000. In 2011, there were 17 and the rate was 3.17/100,000. In 2012, there were 19 for a rate of 3.62/100,000. As you can see, an increase of just one or two deaths can cause a big jump in rates per hundred thousand. By comparison, several states in 2011 had similar or higher child fatality rates per 100,000. Among them were Florida (133 fatalities; 3.33/100,000), Louisiana (45; 4.02/100,000), Michigan (75; 3.27/100,000), Oklahoma (38; 4.06/100,000), Texas (246; 3.53/100,000), and West Virginia (16; 4.16/100,000). I believe that there is some danger in comparing Army rates and civilian rates in that the Army includes fatalities where the manner of death is undetermined, or accidental and perhaps suspicious, and I am not sure that such fatalities would be counted as child abuse related fatalities in the civilian community. Fatalities attributed to inflicted trauma are classified as homicides and those of course are counted the same way in either system.

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Dr. McCarroll: The Army conducts annual review boards to better understand the circumstances of child maltreatment fatalities as well as for quality and process improvement. How is the Army fatality review board conducted?

Dr. Robichaux: We are always by, design, two years behind. The delay is designed to allow all investigative and prosecutorial efforts to be completed. The process begins with the local fatality review board at each installation that has had fatalities. The review is conducted as a garrison-level review process. The Family Advocacy Program Manager (FAPM) is responsible for notifying, training, and bringing all members together for the board. There is an established protocol for review.

We completed the 9th annual Department of the Army fatality review in June 2013. That report has not yet been released, but an article in the Army Times published in July 2013 reported the aggregate statistics. It focused on child deaths for FY2011 (Sandza, 2013).

Dr. McCarroll: What have been the findings from these boards?

Dr. Robichaux: I can give you general results. Looking at the results of boards 7 (2009), 8 (2010), and 9 (2011), 28% were deployment-related in that they occurred while the Soldier was deployed, 85% were children under the age of four and 54% were children under the age of one. The boards identified risk factors, those which might have appeared in one or more reports. In addition to children under the age of four, there were histories of marital problems or domestic violence, substance abuse, special needs children, behavioral health concerns such as depression, suicidal ideation, prior incidents of child abuse, and, as previously noted, the spouse was deployed at the time of the incident.

There were some very troubling percentages associated with impairment of the parents through behavioral health diagnosis, in particular alcohol or substance abuse. The incidents that occurred while the spouse was deployed were largely due to lack of supervision. Typically, the mother, a single parent now due to the spouse soldier being deployed, was depressed and self-medicating with alcohol or prescribed drugs. No one in the house was sleeping. About 80% of the at-home parents endorsed the fact that during the deployment their sleep was significantly disturbed as was that of the children, not surprisingly. Then, of course, we have data that during deployment there is an uptick in psychotropic drugs, primarily antidepressants and probably other sleep medications. That has been identified and supported by looking at the pharmacy and the medical data in terms of bigger mental health bills for the health care system during the war, related to family member care.

Dr. McCarroll: What have been the Army’s actions based on these reviews?

Dr. Robichaux: There are mandatory briefings on shaken baby syndrome and infant safety. In addition, there has been training for commanders on risk factors for child abuse and neglect and making more counselors and home visiting available. It’s part of the shaken baby avoidance campaign. One of the known correlates with child injuries is inconsolable crying.

However, the number of shaken baby deaths was never really very high. It is difficult to use the medical data system to ferret out injuries to children that are a result of inflicted trauma. For instance, you might have some neurological impairment or a bleed that goes untreated. It is very difficult to tie all of that together. What we do know has been extrapolated from the civilian literature. Our shaken baby avoidance campaign primarily relies on...
Child Fatalities Worldwide and in the U.S.

By James E. McCarroll, PhD, David M. Benedek, MD, and Robert J. Ursano, MD

Child maltreatment deaths are among the most tragic events for families and for societies. The prevention of all family maltreatment, including fatalities, is a major goal of the Army Family Advocacy Program (FAP). Fortunately, child maltreatment fatalities in Army families are rare events. Before specifically addressing child fatalities in the U.S. Army, a review of child fatalities in general may be helpful.

Worldwide Deaths of Children

The death of children is a worldwide problem. In 2012, 6.6 million children under the age of 5 died. The leading causes of deaths of under-five children are pneumonia, preterm birth complications, birth asphyxia, diarrhea and malaria. As of June, 2013, the worldwide mortality rate for children less than 5 years of age is 59/1,000 children (range from 202 in Sierra Leone to 3 in Hong Kong, Singapore, Finland, Iceland, Sweden and Luxembourg). The U.S. rate was 8.0/1,000 live births. Worldwide, malnutrition is the contributing factor in over one third of all child deaths. Malnutrition makes children more vulnerable to severe diseases. A child's risk of dying is highest in the neonatal period, the first 28 days of life. Each year, nearly 3 million babies die in their first month of life and 43% of child deaths are to those under the age of five. Child mortality rates vary widely from continent to continent. Over 70% of all child deaths occur in Africa and South-East Asia.

The death rate has always been higher for males than for females. This is thought to be due to more vigorous immune response and greater resistance to infection by females. Worldwide, for the ages 0–4, there were 144,930 deaths of males in 2005–2010; for females, the number was 127,563.

Child Deaths in the United States

Infant mortality. Infant mortality in the U.S. was 6.39/1,000 live births in 2009. In this same year, the rate ranged from 4.4/1,000 for Asian/Pacific Islander mothers to 12.40 for non-Hispanic black mothers. Infant mortality for males was 7.01/1,000, 22% higher than for female infants, 5.75/1,000.

Injuries. Unintentional injuries are the leading cause of death of children ages 1–19 in the U.S. For the time period 2000–2006, unintentional injuries accounted for 44% (n=67,169) of child deaths. Non-injury deaths were 38% (57,373) and intentional injury deaths were 18% (27,222). Among children less than one year old, most children died from non-injury deaths: 4% were unintentional injuries and 1% were intentional injuries. Males had higher death rates than females. Transportation accidents (motor vehicles, pedestrians, and cyclists) were the leading causes of accidental deaths. For children under age 1, suffocation was the leading cause of death; for children 1–4, it was drowning.

Child Maltreatment Fatalities. The following data are taken from the latest annual report of child maltreatment in the United States (Child Maltreatment, 2011). The number of reported child fatalities due to maltreatment during the past 5 years has varied between from 1,608 in 2007 to a high of 1,685 in 2009, and to a low of 1,545 in 2011. The rates of U.S. child fatalities have been remarkably stable over the period at between 2.10–2.30/100,000. Boys had a higher child fatality rate (2.47/100,000) than girls (1.77/100,000). White child victims were 40.5% of all victims, followed by African-American (28.2%) and Hispanics (17.8%). African-American children had the highest rate of child fatalities at 3.92 per 100,000. Children of multiple races (two or more races) had the second highest fatality rate at 2.90/100,000.

Relationship of child to perpetrator. The child's mother acting alone perpetrated 26.4% of child fatalities, fathers acting alone were responsible for 15.3% and both parents were responsible for 22.0%. Perpetrators without a parental relationship to the child accounted for 13.4%. Child fatalities with unknown perpetrator relationship data accounted for 8.3%.

Childhood Deaths and Maltreatment Types. Children who died from abuse or neglect could have suffered from more than one type of maltreatment. Neglect and physical abuse were the major types of maltreatment for child deaths: neglect, 78.4%, and physical abuse, 47.9%.

Risk Factors for Child Maltreatment Deaths. The most commonly reported risk factors for child fatalities are: domestic violence in the home, 16.7%; drug abuse, 12.8%; and alcohol abuse, 5.7%.

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Forensic and Medical Research on Child Maltreatment Death

By James E. McCarroll, PhD, David M. Benedek, MD, and Robert J. Ursano, MD

Child maltreatment death research is published in forensic, medical, and child maltreatment journals, and a wide variety of informational and advocacy sites on the internet. Investigation of child death is a complex process and, as a result, guidance for practitioners such as emergency room physicians and pediatricians is complex. Child deaths from injury and neglect present with many different characteristics of perpetrator, type of injury or neglect, prior contact with child protective services (CPS) authorities, and family risk factors.

It is widely believed that child mortality figures in the U. S. underestimate the incidence of child maltreatment (Herman-Giddens, Brown, Verbiest, Carlson, Hooted, Howell, & Butts, 1999). This conclusion was reached based on a retrospective study of 11 years of child abuse homicides from medical examiner records in the State of North Carolina. Records from 1985–1994 were reviewed and classified using the International Causes of Disease, Ninth Revision, codes E960 to E969 as the underlying cause of death and homicide as the manner of death. Of 259 homicides, 220 were related to child abuse. State vital records under-recorded deaths due to battering or abuse by 58.7%. Black children were killed at three times the rate of white children (4.3/100,000 versus 1.3/100,000). Males were 65.5% of the known probably assailants. Under-recording prevents improved strategies for prevention of child homicides. Other causes of undercounting are inconsistencies in investigations, reporting, legal standards and definitions, medical diagnosis and death certificate coding (Palusci, Yager & Covington, 2010.)

Neglect can also be a cause of child maltreatment mortality. A retrospective review of pediatric deaths in South Carolina over a 25-year period found 16 cases due to pediatric neglect (Knight & Collins, 2005). Cases were analyzed for age, sex, race, cause and manner of death, autopsy findings, ancillary studies, past medical history, social/family history and caregiver. Six deaths were due to malnutrition/starvation and/ or dehydration. Others were electrocution, drowning/aspiration, delayed or absent medical therapy, toxic ingestions, and hyper- or hypothermia. Researchers noted that typically investigators encounter cases where the child under the age of one year has been deprived of food or drink, or the independently mobile child has been inadequately supervised. As a prior history of maltreatment or nonfatal neglect may be missing, medical records should be included as part of the investigation.

A study of 4.3 million children in California during the time period 1999–2006 found that children who had been reported for nonfatal maltreatment subsequently faced a heightened risk of unintentional and intentional injury death during their first 5 years of life (Putnam-Hornstein, 2011). These children died from intentional injuries at a rate that was 5.9 times that of children who had not been reported, and died at twice the rate from unintentional injuries. A prior allegation to CPS was the strongest independent risk factor for injury mortality before the age of 5 years. Because the study demonstrated that children who are reported for maltreatment can die at a higher than normal rate from unintentional injuries, a focus solely on intentional injuries may miss a significant opportunity for child protection from unintentional injuries.

Determination of death as a result of maltreatment depends on good investigation, documentation and recording of events. Death review boards are very helpful in providing for understanding these deaths. Such reviews are conducted by the military services as well as by citizens review panels (Palusci, Yager & Covington, 2010.) The National Death Reporting System is also a significant source of information for research on all child fatalities (Klevens & Leeb, 2010). Study of the results of such review can provide service workers and practitioners with significant information to prevent child deaths and improve the lives of children and families.

References

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Major Risk Factors for Child Maltreatment Fatalities

By James E. McCarroll, PhD

The National Center for Child Death Review is a resource center for state and local child death review program and is funded by the Maternal and Child Health Bureau. The Center, (http://www.childdeathreview.org/aboutus.htm), promotes, supports and enhances child death review methodology and activities at the state, community and national levels.

Most child maltreatment deaths result from physical abuse, in particular from injuries to the head. These injuries are likely to occur when a child’s head is hit against a surface such as a wall or is severely struck or violently shaken. Another common cause of child physical abuse deaths is injury to the abdomen often through kicks or punches, which lead to internal bleeding. The most common reason for these injuries is that caretakers lose patience when the child does not stop crying. [Editor’s note: See interview with Dr. Robichaux and the card for Soldiers “Tips on Soothing a Crying Baby”.

Fatalities from neglect can occur when caregivers fail to adequately provide for or supervise their children. Examples are failure to provide food leading to malnutrition, starvation or dehydration. Other caregiver omissions include the failure to nurture or to provide medical care for children or failure to supervise. These omissions may result in bathtub drownings, suffocations, poisonings and other fatal incidents. Fatal abuse is often interrelated with poverty, domestic violence and substance abuse.

It is difficult to predict child maltreatment deaths, but major risk factors have been identified by the CHD.

- Younger children, especially under the age of five
- Parents or caregivers who are under the age of 30
- Low income, single-parent families experiencing major stresses
- Children left with male caregivers who lack emotional attachment to the child
- Children with emotional and health problems
- Lack of suitable childcare
- Substance abuse among caregivers
- Parents and caregivers with unrealistic expectations of child development and behavior

These risk factors are helpful tips for all providers who are in contact with families in distress.

Children Seeking Help through the Use of Child Helplines

By James E. McCarroll, PhD

Children’s problems occur worldwide. A recent United Nations report (http://srsg.violenceagainstchildren.org/story/2013-11-20_929) provided data from a ten-year project, the Child Helpline International (http://www.childhelplineinternational.org), showing that children around the world contact helplines for support with violence and abuse, peer relationships, psychosocial and mental health and family conflicts. This report provides insight into the nature of challenges that children face from their own point of view. Adults on the responder end of these helplines attempt to help children take control of their own lives and resolve their problems as best they can.

The study found that children are willing to share their concerns and fears once they trust a system. There were over 4 million reports, the most from Europe (46%) followed by Asia-Pacific (31%), Africa (14%), Americas and the Caribbean (7%) and the Middle East and North Africa (2%). The number of contacts has increased by 5% per year. Child helplines also received calls for help dealing with problems at school including academics, performance anxiety, violence and abuse committed by teachers and peers. Bullying was found to be a worldwide concern. Immediate or extended family members were reported to have com-

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There was one other initiative that might not be referenced in the results of the reviews. It was an outcome of the research findings related to increased risk of child neglect during deployment — a MEDCOM policy urging more aggressive screening for depression in spouses of deployed soldiers. The screening is a verbal inquiry from the medical provider. The inquiries have to come from the provider. If it is done by the person doing the blood pressure check, you often will get a negative response. We tried to get the word out to all primary care physicians, primary care managers, and pediatricians who might see the parent in conjunction with seeing the child, and ob-gyn providers who see the spouse.

**Dr. McCarroll:** Are cases that were not previously known to FAP reviewed?

**Dr. Robichaux:** They are. We review any fatality that is related to child abuse or domestic violence. If a case was not entered into the Army Central Registry (ACR) as a FAP-related fatality, but on closer observation the board finds that it should have been, it is presented to the local hospital Case Review Committee. If they find that it should have been a FAP case, it is put into the ACR.

The child cases that are reviewed are the ones where there was inflicted trauma or accidental death due to parental negligence. In cases of domestic abuse, of course, any homicide and any suicide. Sometimes the suicides are not connected to a homicide. Sometimes, the suicides are in close proximity to or in an ongoing domestic violence dispute. An example might be a situation in which the couple argued; they had been arguing and fighting all day. She was able to flee to a neighbor for help. He had beaten her and abused her. Anticipating that he would go to jail and that he had contributed to the end of the marriage, he took his own life.

**Dr. McCarroll:** Is there any mandatory requirement for abusive families to have home visiting?

**Dr. Robichaux:** It is not mandatory. You can make soldiers do things, but you cannot force spouses. That is one of the themes in the last two fatality reviews. Quite a few cases were known to helping agencies and had received referrals to the New Parent Support Program (NPSP). NPSP contacted the families and the families declined the services. To many people on the Fatality Review Board, this was just so sad because we had an opportunity; we might have been able to make a difference, but we were turned away.
To some degree, we believe that there is a training issue involved in getting the families to accept the service. We have not been able to train the people who are in the positions. They are both social workers and nurses and in either case they appear to be insufficiently trained on how to deliver services to resistant clients. It is just not that difficult. We know that we could up the acceptance rate if we simply had the ability to train these people. Social workers have been doing this for a 100 years or more: delivering services to people who do not want their help. You do it by approaching them in a helpful fashion, by providing support. One means is by providing something tangible. It could be a used washer or dryer that you could get a helping agency or a church to donate. That something tangible creates a sense of trust and obligation on their part to invite you back. In addition, the connection between labor and delivery, maternal and infant health in the hospital, and NPSP staff at ACS needs to be very strong.

**Dr. McCarroll:** So much of the success of these programs is personality-driven and dependent on the abilities and desires of the leaders on the installation to work cooperatively.

Dr. Robichaux: Exactly. That is a potential vulnerability for our programs.

In summary, the youngest children are the most at-risk for child deaths. Death rates may vary geographically around the world. Childhood deaths are due to disease, injury, lack of medical care, and maltreatment. Child protection workers and health care providers who are aware of as many aspects of child vulnerability as possible can prevent many child deaths.

**CDC Childhood injury reports can be found at:**

**The latest U.S. child maltreatment data can be found at:**

**Mortality data can be found at:**
http://esa.un.org/unpd/wpp/Excel-Data/mortality.htm
http://www.who.int/mediacentre/factsheets/fs178/en/

**Information on death rates for males and females can be found at:**
http://www.pnas.org/content/105/13/5016.full

**References**

Websites of Interest

The National Center for Child Death Review Policy and Practice at the Michigan Public Health Institute, Okemos, MI 48864 lists resources for the prevention of child maltreatment as well as information on prevention programs.

The following are but a few of the long list of resources that may be helpful in understanding and preventing child maltreatment. Most of the resources listed on this site link to further resources.

- National Center for Child Death Review Policy and Practice
  http://www.childdeathreview.org/


- Healthy Families America
  http://www.healthyfamiliesamerica.org/home/index.shtml

- Understanding Child Maltreatment, CDC Fact Sheet 2010

**Forensic and Medical Research, From page 4**


**Children Seeking Help, From page 5**

mitted 58 percent of the physical abuse. The majority (60%) of abuse and violence was reported by girls. Family matters concerns were parent-child relationships, parents in conflict, divorce, and separation and new or blended families.

Many times, children’s concerns may be expressed both within and outside of the family and are recognized by children as challenge to themselves, their parents and other caregivers, peers, and support providers. Thus, specific inquiry to children, themselves, into the many topics of potential concerns can open new avenues of support to help them.

The National Child Abuse Hotline can be reached at 800-422-4253 and at http://www.childhelp.org/pages/hotline-home

This service began in 1982 and has received over 2 million calls from children at risk for abuse, distressed parents seeking crisis intervention and concerned individuals who suspect that child abuse may be occurring.

Neglect can also be a cause of child maltreatment mortality.