OFFICE OF THE INSPECTOR GENERAL
Department of Children and Family Services
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REDACTED REPORT

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File No: 021095
Minor: Nellie Paulsen DOB: 10/01; DOD: 2/02
Subject: Child Death

Summary of Complaint
Four-month-old Nellie Paulsen died in February 2002. The Medical Examiner's Office determined that Nellie died from asphyxia due to gagging. The manner of death was homicide. Nellie's 40-year-old father confessed to police that he stuffed a washcloth into Nellie's mouth to stop her from crying. The OIG investigated this child's death because there was a prior DCP investigation involving Nellie within a year of her death. On December 11, 2001, the hotline was contacted alleging burns by abuse to Nellie by her father. The report was unfounded on January 9, 2002.

Investigation

Background
Nellie Paulsen was born in October 2001 weighing 4 pounds, 15 ounces. She died in February 2002 at the age of four months. At the time of her death, she weighed 10 pounds, 8 ounces, placing her in the 5th percentile for weight for her age. She measured 24½ inches long, placing her in the 50th percentile for height for her age. Her hydration and cleanliness were good. Nellie lived at home with her 29-year-old mother, Damara Deahl,[1] and her 40-year-old father, Alec Paulsen. According to Mr. Paulsen, the parents were married in 1995. Nellie was the couple's only child together. The mother had one older child, Jared Deahl (DOB 12/91), who entered DCFS custody in April 1992, and was adopted October 1, 1997, by Ms. Deahl's grandmother.

The Paulsen family lived in a building that is nine stories tall and has over one hundred units. Single people, families with children, and senior citizens live in the building. The Paulsen family resided in a one-room studio apartment. The police report of Nellie's death noted, "East of the bed is a large plastic storage container that is on the seats of two kitchen chairs that are facing each other. The plastic container is a make shift crib, which is filled with foam and contains a baby blanket, baby pillow and a couple of baby toys."

According to Ms. Deahl, Mr. Paulsen was the primary caregiver for Nellie because Ms. Deahl suffered from numerous medical problems. Mr. Paulsen was unemployed. He liked to care for the baby and preferred to stay home.

[1] Ms. Deahl went by two names, Damara Deahl and Damara Paulsen. She will be referred to as Damara Deahl throughout this report.

In February 2002, Mr. Paulsen called 911 saying he found Nellie unresponsive. The Fire Department responded and Nellie was brought by ambulance to the hospital where she was pronounced dead. The father was questioned by police. After giving several explanations for how Nellie may have died, Mr. Paulsen confessed that he put a washcloth in Nellie's mouth to stop her from crying. Mr. Paulsen said that he was tired because he hadn't slept all night. He was also tired, frustrated, and crabby because he and Ms. Deahl did not get out of their small apartment together anymore. Mr. Paulsen explained that Ms. Deahl had left for an appointment with the Department of Rehabilitation Services and he was supposed to feed Nellie. He decided to fix Nellie's hair before he fed her. While he was fixing the top and sides of her hair, Nellie was crying, so he folded a baby washcloth and put it in her mouth. Nellie stopped crying when he put the cloth in her mouth. He then laid Nellie face down on the bed to fix the back of her hair. When he was finished, he took the washcloth out of her mouth and laid her back on the bed while he got himself ready. Nellie started to cry again and he tried to comfort her by talking and singing to her. When this didn't work, he put the washcloth back in her mouth. He got some stuff together in the room and noticed that Nellie had turned over onto her stomach. He went into the bathroom, smoked a cigarette, and dozed off while seated on the toilet. When he came out, Nellie was still on her stomach and wasn't moving. He turned her over, changed her diaper, and realized the washcloth was still in her mouth. He took it out and noticed that Nellie was limp, and he could not feel her breathing. He performed CPR and called 911.

The Medical Examiner's Office determined that Nellie died from asphyxia due to gagging and ruled her death a homicide. At autopsy the medical examiner discovered both internal and external injuries. Evidence of external injury included: a petechial hemorrhage (seen as a spot of blood) in the lower white area of her left eye; redness of the soft palate in the back of her mouth indicating inflammation; a reddish-brown abrasion just below her right knee; and old burn scars on her left chest, left forearm, arm, armpit and left shoulder. Evidence of internal injury included: three healing rib fractures on her right side, six healing rib fractures on her left side, including one rib that was cracked in the front as well as on the side; hemorrhages (internal bruising) on her right back and elbow; and an old contusion in the area of her brain above her right ear.

The father was charged with first-degree murder. He was also indicated by DCFS for death by abuse and bone fractures by abuse.

When the mother was interviewed by DCP in April 2002 (forty-two days after the baby's death), she had not yet buried the baby or had a service for her. Ms. Deahl did not believe her husband hurt the baby and said he would spend hours combing Nellie's hair no matter how much she cried. The mother believed the baby suffered a seizure and that was the reason she died. The mother reported being on a lot of medication and had recently been taking Ativan.[2]

DCP Investigation Prior to Nellie's Death

Two months prior to Nellie's death, December 11, 2001, a report was made to the hotline alleging burns by abuse to 2-month-old Nellie by her father, 40-year-old Alec Paulsen. The investigation was unfounded on January 9, 2002.

According to the hotline report, Nellie was brought to the hospital with blistering burns on the left side of her body. Initially, Damara Deahl contacted the hospital and stated that Nellie was burned while Alec Paulsen was bathing Nellie, and the burns were blistering. The hospital advised the parents to call an ambulance to bring Nellie to the hospital, which they did. The hospital noted that Nellie had first and

[2] Ativan is an antianxiety medication used to help reduce anxiety associated with depression. Ms. Deahl had a history of depression.

second degree burns to the left side of her face, left chest, and left side of her trunk, and blistering to her left arm.[3] The injuries were suspicious due to their location as compared to the parents' explanation for the injuries. The hospital noted that if Nellie burned in bath water, the burn would likely be on her bottom area, not her left side. Mr. Paulsen said that Nellie was moving around as he attempted to bathe her. Nellie was transferred to a children's hospital.

On December 12, 2001, the investigation was assigned to child protection investigator Tammy Feeney. A supervision note in the case record documented a supervisory telephone conference in which Ms. Feeney was instructed by her supervisor to interview the reporter, parents, burn doctor, and child protective services team; notify the police of the report; conduct a LEADS check; and measure the water temperature in the home.[4]

Ms. Feeney's first investigative activity was to check on the condition of the baby who was hospitalized. The hospital social worker said the parents seemed appropriate and concerned about the baby and spent the night with the baby. The doctor of the child protective services team said the baby was in stable condition with first and second-degree (partial thickness) scald burns on her left side. She said the father sought medical care immediately for the infant and the burns appeared consistent with the father's story, but she did not know the temperature of the water.

Ms. Feeney interviewed the father, Alec Paulsen, in person on December 13, 2001, at the family's apartment. Mr. Paulsen stated he was bathing Nellie in the bathroom sink because it was very hot in the apartment and he was trying to cool her off. He was holding Nellie in his left arm. He had his hand and arm supporting her head and back. Water was already in the sink and Nellie was moving around. As he tried to get a better grip on her, his hand accidentally hit the hot water knob and the water came out very hot. He said he immediately removed her from the sink, put some saline on the red area, put some Aquaphor[5] on the area, wrapped her in a cool towel, and got her ready to go to the emergency room. His wife had gone to the store. She arrived home a short time later and they took Nellie to the hospital. The investigator observed the bathroom area and felt the water. She noted that it "felt very hot to the touch" and that "the apartment was extremely hot." The story the father told to the child protection investigator was consistent with the explanation he gave to staff at the hospital.[6]

Ms. Feeney interviewed Damara Deahl in person at the family's apartment. Ms. Deahl said she had gone to the store and was not home when the incident occurred. When she returned, her husband told her the baby had been burned by the hot water and they immediately took the baby to the hospital. She stated that neither she nor her husband would hurt the baby. Ms. Deahl said the heat in the apartment is a complaint for many of the residents and that they were trying to move, but needed help. Ms. Deahl said Nellie had not been to her pediatrician since birth because they didn't have a medical card. She said she had an appointment today to see a public aid worker for a medical card and that the social worker at the hospital said she would help her get one. Ms. Deahl reported having social anxiety disorder and being on Paxil prior to her pregnancy. Her doctor took her off the medication during her pregnancy and had not put her back on. He said she only needed counseling, and she saw him once a month.

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[3] The burns to her left arm were the most serious; they were deep second-degree burns and skin grafts were later applied.

[4] According to the case entry, Ms. Feeney was assigned the investigation because she was already at the children's hospital on another report. The case entry is misdated 12/11/01; the date was 12/12/01.

[5] Aquaphor is an ointment for babies. It can be used on dry skin, diaper rash, and minor burns and abrasions.

[6] According to the doctor from the child protective services team, the father said he bathed the baby in the bathroom sink and accidentally hit the knob. Hot water came on and burned the baby. The father said the water gets very hot.

Ms. Feeney interviewed a friend and neighbor of the Paulsen family at the family's apartment building. The neighbor said she would be willing to care for the baby if a safety plan was necessary. She also said both parents were good with the baby and she did not see any indications that the baby was being abused or neglected.

Ms. Feeney learned via a check of DCFS's computer system that Ms. Deahl had a prior case open with the Department from April 1992 to November 1998. The case involved Ms. Deahl's son, Jared, who was born in December 1991. Jared entered DCFS custody in April 1992 and was adopted by his maternal great-grandmother in October 1997.

Later that same evening, Ms. Feeney spoke with Ms. Deahl by telephone. Ms. Deahl said that her first child was adopted by her grandmother. She explained that she had the child when she was 17 years old and could not take care of him because he was very sick and in and out of the hospital. Ms. Deahl stated that she wanted her daughter to come home and the hospital said DCFS would not let her go home. She said that the woman upstairs from them also got a burn from the water. Ms. Deahl reported that she was not on any medication and that her husband "receives money because of a back injury."

LEADS checks were conducted on Damara Deahl and Alec Paulsen on. Both were negative for criminal histories in Illinois.

On December 14, 2001, Ms. Deahl informed Ms. Feeney that there was a hearing for the building violation and that she thought someone was tampering with the boiler in her building. Ms. Feeney did not recall getting any further information. She did not speak with the building's management or the Building Department.[7]

On December 17, 2001, Ms. Feeney's supervisor contacted Jared's adoption assistance caseworker who said the case was opened for dependency because the mother was very young and Jared was a sick baby. She said that Ms. Deahl signed specific surrenders to the great-grandmother.

Ms. Feeney interviewed the head of the child protective services team on December 18, 2001, who said she was not worried about Nellie as the burns were consistent with the father's explanation. She said the water temperature needed to be measured, but she still felt okay about the infant.

On December 19, 2001, Ms. Feeney met with her supervisor. The supervisor instructed Ms. Feeney to talk to the police, the hospital social worker, and the doctor about the report; tell the social worker that a plan was ready for the child when she was ready for release if the hospital had not yet made a decision about the burn; follow up on the mother's mental health by contacting her doctor; talk to the adoption worker; and inform the family the Department could assist them with Norman funds if the building they were living in was not appropriate.

On December 20, 2001, Ms. Feeney spoke with the reporter, a nurse at the hospital. She said that the mother called the hospital five minutes before bringing the baby into the emergency room. The parents said the baby was burned by hot water while being bathed by her father, and she contacted the hotline because she did not believe the story. The nurse was informed that the children's hospital's child protection team had examined the infant and determined that the burns were consistent with the explanation.

[7] The OIG contacted the city's building department. After Nellie was burned, the Paulsen's friend and neighbor made a complaint to the building department on December 13, 2001. The complaint was accepted, but promptly closed. The building department enforces a minimum water temperature of 120 degrees Fahrenheit. It does not enforce the maximum water temperature, which is 140 degrees Fahrenheit.

Ten days after the burn incident, Ms. Feeney spoke with the mother and told her that a visit would be made today to measure the water temperature. The mother said okay. An hour later there was no answer at the family's door. In an interview with the OIG, Ms. Feeney said she did not measure the bathroom sink's water temperature during her initial visit to the family's apartment on December 13, 2001, because she did not have a thermometer with her and did not know she was supposed to take one with her. She also was not sure if she had access to a thermometer at the time. Ms. Feeney said that when she got a thermometer, she called Ms. Deahl to say she was coming out that day. She thought it was strange that Ms. Deahl was not there to let her in because she told her she was on her way. She reported this to her supervisor. Ms. Feeney did not know whether the water temperature in the Paulsen apartment was ever measured by anyone (e.g., DCFS, police). Ms. Feeney said that she currently has a thermometer that does not work.[8] Since the Paulsen investigation, she has not needed to measure the water temperature in a child protection investigation.

Ms. Feeney spoke with the police officer investigating the burns on December 21, 2001. He said he went to the home, but did not have anything with which to test the water. He said when he turned on the water, the water splashed out of the spout and he could not keep his hand under the water. He said the doctor said that would be enough to burn the child's skin. According to his police report, which is in the record, a doctor at the hospital said that an infant's skin is more thin and sensitive than an adult's and would likely burn in hot water even if an adult were able to put his hand under the water.[9]

On the evening of December 21, 2001, Ms. Feeney's supervisor went to the family's home to discuss housing. The mother told her she and her husband did not want to move from their home and that they wanted their child back home with them. She said that the supervisor could look at the hot water, but that it was fixed and no longer got hot. The supervisor did not measure the hot water temperature. The supervisor asked Ms. Deahl if she would be willing to work with a follow-up worker for a while to help her with her child. Ms. Deahl said she did not want a worker because last time she had one, her son was taken from her. She said she did not need help. Ms. Deahl said she would make sure her daughter went to the doctor for follow-up. The supervisor gave Ms. Deahl a list of housing referrals. The father told the supervisor that he cares for the child all the time. He bathes, feeds, and changes her. He said the mother really only cares for the baby if he has to go somewhere. Mr. Paulsen said he did not want to move unless someone could find the family an apartment that only cost $500 per month. He said he did not want help from the Department.

Ms. Feeney went on vacation December 22, 2001, and returned to the office on January 2, 2002. Ms. Feeney's supervisor continued to work on the case during Ms. Feeney's absence. On December 22, 2001, the supervisor spoke with the emergency room doctor at the hospital. He said he was not able to assess if the burn was consistent with the explanation and suggested that she talk to the doctor at the children's hospital.

On December 24, 2001, the supervisor spoke with a child protection manager about the case. According to her case entry, the child protection manager said it was okay to release the child to the parents when the doctors were ready. They discussed unfounding the report, but opening it for services.

On December 24, 2001, the supervisor informed the hospital that the baby could be released to the parents and that DCFS was going to offer the family services, but they would have to agree to accept them since

[8] The Inspector General recently was told by DCP managers that there were no batteries for the Department's digital thermometers.
[9] This doctor may have been a resident on rotation in the burn unit. She is no longer with the burn unit and the hospital human resources department had no information about her.

they were not being indicated for abuse or neglect. The supervisor requested a copy of Nellie's medical records.

A supervision note dated December 26, 2001, noted that Ms. Feeney was on vacation. The supervisor wrote that the case would be unfounded and opened for services once the parents agreed. She noted that the Associate Deputy Director for Child Protection wanted the case opened for short-term services and that someone needed to talk to the parents about services and obtain copies of the police and medical reports.

The supervisor interviewed Ms. Deahl's grandmother on December 27, 2001. The grandmother said that Jared was sick as a baby and her granddaughter signed papers so he could live with her, and she could get a medical card for Jared. She said Ms. Deahl saw Jared sometimes. The grandmother did not want DCFS talking to Jared because he was never alone with his mother, and he did not know anything about her problems. The grandmother said Ms. Deahl is slow and does not understand things, but she did not think Ms. Deahl ever hurt the baby.

In a case entry dated January 2, 2002,[10] Ms. Feeney contacted Ms. Deahl's psychiatrist's office and spoke with the doctor's secretary. The secretary said they were unable to send her any information regarding Ms. Deahl. Ms. Deahl had signed a consent for release of information and Ms. Feeney told OIG investigators that she had faxed the consent to the psychiatrist's office. The supervisor said the doctor refused to release the records.[11]

The supervisor spoke with the parents by telephone on January 2, 2002. She informed them that the case would be unfounded. She told them they should make sure they followed through on all of Nellie's medical treatment because they needed to make sure she did not get an infection or bad scar from the burn. She talked to the parents about taking Nellie to the clinic for her regular check-ups. The supervisor told the parents they could have a worker short-term to help them with their housing, parenting, and medical appointments for Nellie, but the parents did not want the Department's help.

On January 3, 2002, the supervisor contacted the clinic and spoke with a nurse who said the mother was supposed to follow up with the doctor and then they could come to the clinic for regular medical treatment for the child. The nurse said she would obtain information from the social worker.[12]

The supervisor contacted the police officer investigating the case. The officer said the case was unfounded as an accidental injury and that he would fax over his report. A copy of the report is in the file. Both parents were interviewed by the police. The father said he was giving Nellie a bath because it was very hot in the apartment and Nellie was running a temperature. He said Ms. Deahl had gone to the store to get a thermometer and some children's medicine, but before she left, she filled the bathroom sink with cool water so he could give her a bath and try to bring her temperature down. Mr. Paulsen said when he went to take Nellie out of the sink, his hand hit the hot water knob and turned the hot water on, splashing Nellie and causing burns to her left arm and left side of her face. Ms. Deahl said the apartment

[10] This was probably January 3, 2002, because Ms. Feeney took a sick day on January 2 and was not in the office.
[11] The doctor should have released the records as Ms. Deahl had executed a valid consent for release of information. The Division of Child Protection, however, has the power to "secure by subpoena both the attendance and testimony of witnesses and the production of books and papers relevant to such investigation." 20 ILCS 505/21. Failure to comply with an investigative subpoena is a Class B misdemeanor. Since the Mental Health Code requires both a subpoena and a consent for release of this type of mental health information, the Office of the Inspector General was unable to obtain the information with a subpoena alone.
[12] The OIG attempted to get records form the clinic. The clinic did not have any record of Nellie Paulsen attending the clinic.

was hot and Nellie was running a temperature so she decided to give her a bath to try and cool her down. She filled the bathroom sink with water and went to the store to get some children's medicine and a thermometer. When she returned home, Mr. Paulsen was upset and told her what happened. They called the hospital's emergency room to ask what they should do. The police interviews were the only interviews in which the parents mentioned Nellie running a temperature.[13] The police went to the Paulsen's apartment and noted that it felt warm inside. They looked at the bathroom sink and noted it had water in it. They turned on the hot water and noted that it came out very fast and was very hot.

A Child Protective Services consult report dated December 12, 2001, is in the investigative file. According to the report, both parents were on disability[14] and served as the baby's primary caregivers. Their daughter had not seen a doctor since birth because of their difficulty getting a medical card. Both parents and the baby lived in a studio apartment. The parents reported that the building was not suitable for children and did not allow children in the building.[15] The parents suspected high lead exposure and reported that there seemed to be trouble with the heating, as their apartment and the water temperature were very hot. Nellie's burns were partial thickness scald burns to her left shoulder, arm, and lateral chest area involving approximately 7% of her total body surface area. Physical exam showed her to be well nourished with no other signs of abuse or neglect. The team opined that the history provided by the parents was consistent with the injury, indicating that the burns were likely accidental.[16] The team noted that there was no delay in seeking medical care after the incident and both parents corroborated the mechanism of injury. The team noted that there was still concern for Nellie's well-being due to the parents' description of their living conditions, in particular the alleged overheating of the apartment and the exposure to lead. The team recommended a thorough investigation of the apartment and the boiler/heater temperatures. They recommended clarification of the rules regarding children in the building, particularly if there was any risk of lead exposure for the child. The team also noted that there was a lack of medical follow-up in the case that seemed to be due to the parents' inability to obtain medical coverage for the baby. It was recommended that the parents receive information about places they might take the baby for routine immunizations and well-child care. The team concluded that they did not feel there was any risk of harm to the child if she was discharged home to the parents with clear instructions on care and follow-up of the burn.

Ms. Deahl's Prior DCFS Case

The OIG reviewed Ms. Deahl's prior case record. According to the record, Jared entered foster care on April 30, 1992, after his mother left him with his maternal grandmother for over a month without an adequate care plan. Jared had asthma and the hospital was refusing to treat him any longer without Ms. Deahl's consent. Jared was placed with his maternal great-grandparents. Ms. Deahl signed surrenders on January 29, 1993, for Jared to be adopted. Jared was adopted by his maternal great-grandparents on October 1, 1997. Records note two psychiatric admissions for Ms. Deahl. The first admission was in 1989 for depression.[17] The second occurred in August 1991 when 18-year-old Ms. Deahl was five

[13] Upon arrival at the hospital, Nellie's temperature was 97.8 degrees Fahrenheit. Upon admission to the children's hospital, Nellie's temperature was 37.6 (99.6 degrees Fahrenheit). Both temperatures are considered normal for a child Nellie's age.

[14] Mother reported father received money for a back injury. The CPI, Ms. Feeney, said she knew neither parent worked, but she did not recall if she knew both parents were on disability. She did not know why they were on disability.

[15] The OIG viewed the building and spoke with building management. Children do live in the building.

[16] In the letter, the team wrote, "According to the medical record and our social worker's interview, her father reports that he was giving her a cool bath around 8pm on 12/11/01. She was completely undressed, and he was holding her in his left arm and splashing cool water on her because the apartment was too hot. He says that he bent down and accidentally bumped the hot water knob, and hot water immediately poured out of the faucet onto the baby's arm. Both parents were unsure of what to do and called the ER at the hospital for medical advice."

[17] Records regarding this admission were not a part of the case record.

months pregnant with Jared. Ms. Deahl was diagnosed with Major Depressive Disorder, recurrent, severe with psychotic features and Personality Disorder Not Otherwise Specified. She was hospitalized for two weeks and expressed ambivalence about her pregnancy. In a social history, dated May 28, 1992, Ms. Deahl said she never felt bonded to her son.

OIG Scene Investigation

An OIG investigator conducted a scene investigation and mock demonstration of the burn incident in the Paulsens' apartment. The building is nine stories tall and has 126 units. Single people, families with children, and senior citizens live in the building. The Paulsens lived in a studio apartment. Along one wall was a kitchen sink, stove, and refrigerator. There was a small separate bathroom with a toilet, sink, and shower. The sink bowl measured 18.5 inches long, 13 inches wide, and 9.5 inches deep (from bottom of basin to underside of faucet). There was one faucet and two handles. When facing the sink, the cold-water handle was on the right side, the hot water handle on the left side. The handles pull toward you to turn the water on. The handles are tight, not loose. They were located approximately 1½ inches from the back of the vanity (up against the wall). The building manager reported that the bathroom hardware has not been changed since the Paulsens lived in the apartment.

The OIG investigator measured the bathroom sink water temperature with a standard candy thermometer. The thermometer was placed under the running water until it reached 125° Fahrenheit and stopped rising (approximately 1 minute). The building manager could not recall there being any complaints in the building about the water temperature being too hot. No work orders dealing with water temperature could be found for the Paulsens apartment.

The OIG investigator conducted a mock demonstration of the reported incident in the Paulsens' bathroom using a doll. The investigator held the doll in her left arm and placed the doll in the sink. The investigator moved her hands around in various ways to try to accidentally hit the hot water handle as the father said he did, but found it impossible to do. The handle turned on by pulling it forward and there was not sufficient room behind the handle to knock it on.

Analysis

SCOPE OF THE PROBLEM

Nationally, thousands of children suffer burn-related injuries every year. Children ages 4 and under are at the greatest risk, with an injury rate more than four times that of children ages 5 to 14. (National Safe Kids Campaign, 2003). There are six categories of burn injuries: flame, scald, contact (with hot object), electrical, chemical, and ultraviolet radiation (sun) (McLoughlin & Crawford, 1985). Scald burn injuries (those caused by hot liquids or steam) are the most common type of burn-related injury among young children while flame burns (those caused by direct contact with fire) is more prevalent among older children (National Safe Kids Campaign, 2003). In 2001, an estimated 99,400 children ages 14 and under were treated in hospital emergency rooms for burn-related injuries. Of these injuries, approximately 27,200 were scald burns (National Safe Kids Campaign, 2003).

The peak age for accidental scald burns is between the first and second birthdays, when children acquire mobility without the means to protect themselves. Exploratory behavior is at a peak and items such as coffee cups, teakettles, and pot handles become dangerous (Hobbs, Hanks & Wynne, 1999). Hot tap water accounts for nearly 25% of all scald burns among children and is associated with more deaths and hospitalizations than other hot liquid burns. Tap water burns most often occur in the bathroom and tend to be more severe and cover a larger portion of the body than other scald burns (National Safe Kids Campaign, 2003). Older toddlers may be able to climb into a bath into which scalding hot water has been run (Hobbs, Hanks & Wynne, 1999).

The peak age for abusive burns is also one to two years (Scalzo, 1994). The proportion of children with burns and scalds resulting from abuse is not accurately known, with estimates from 4% to 39% (Hobbs, Hanks & Wynne, 1999). It is suspected that under-diagnosis is the rule, as with abuse in general (Hobbs, Hanks & Wynne, 1999). In Fiscal Year 2002, 1202 children were reported to Illinois DCFS for an allegation of burns by abuse or neglect. Only 187 children (.16%) were indicated as victims: 89 for burns by abuse and 108 for burns by neglect (10 children were indicated for both abuse and neglect) (DCFS Office of Quality Assurance, 2003).

BURN PRESENTATION

Burns are usually classified according to their severity, depending on the number of layers of skin injured. First-degree burns, also called partial thickness burns, are superficial burns with damage being limited to the outer layer of the skin (Procedure 300: Appendix B, Burns Definition). They are characterized by redness, tenderness, and swelling. Sunburn is an example of a first-degree burn (Smith, Benton, Moore & Runyan, 1989). Second-degree burns, also called partial thickness burns, are burns in which the damage extends through the outer layer of skin (epidermis) into the inner layer (dermis). (Procedure 300: Appendix B, Burns Definition). They are characterized by blisters on the skin's surface with increased sensitivity to touch. When severe, these injuries can sometimes require surgery (Smith et al., 1989). Third degree burns, also called full thickness burns, are burns in which both layers of skin are destroyed with damage extending into underlying tissue. (Procedure 300: Appendix B, Burns Definition). The area looks white or charred and is not sensitive to touch or pin prick. These injuries require hospitalization and often require skin grafting. (Smith, et al., 1989). Fourth degree burns, also called full thickness burns, are burns that extend beyond the skin and underlying tissue into bone, joints, and muscles (Procedures 300: Appendix B, Burns Definition). These are the most serious burns.

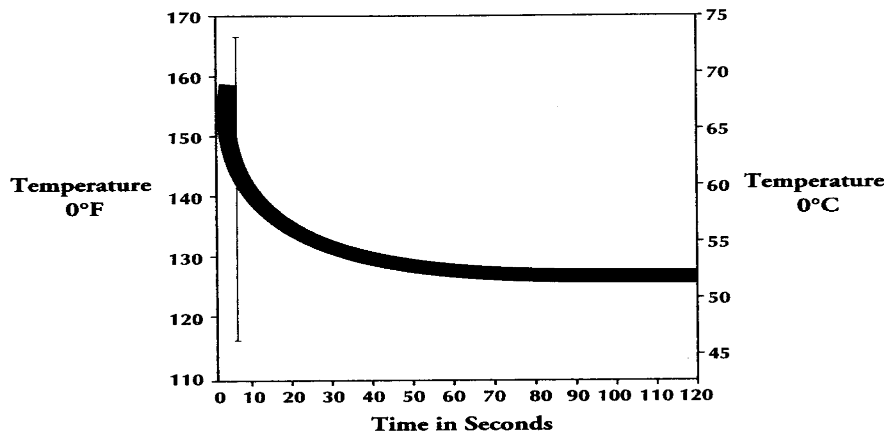
The severity of a burn depends on (1) the thickness of the skin, (2) the temperature of the burning agent, and (3) the length of time of contact with the skin (Jenny, 2001; Jewett & Ellerstein, 1981). Skin thickness varies with age and sex and location of the tissue on the body (Spillert, Vernese & Suval, 1984). Infant skin in many parts of the body is less than half as thick as adult skin (Heimbach, Engrav & Grube, 1992). Skin thickness reaches adult levels by age 5 years. Skin is thickest on the palms and the soles and thinnest on the eyelids and genitals (Jenny, 2001).

Data exist regarding time to cutaneous (relating to the skin) burning as a product of the temperature of water in adults. Water at 44° C (111.2° F), the lowest temperature responsible for cutaneous burning, requires 6 hours to produce a first-degree burn. For each degree Celsius above 44° C and up to 51° C (123.8° F), the time required to produce a burn of given depth decreases by approximately one half. At 49° C (120 F), the lowest setting on most gas water heater thermostats, it takes 5 to 10 minutes to cause full-thickness burns to adult skin. However, at 51°C (124° F) it takes 4 minutes to cause a full-thickness burn. At 52° C (125° F) it takes 2 minutes, and at 54° C (130° F) it takes only 30 seconds to result in a full-thickness scald burn. Water at 60° C (140° F) takes 5 seconds and at 66° C (150° F) takes 2 seconds to produce full-thickness scald burns in an adult (Moritz and Henriques, 1947). At 70° C (158° F), a full-thickness burn will occur in less than 1 second (Robinson & Seward, 1987).

Temperature and duration of exposure sufficient to cause full-thickness burns in ADULTS

120° F (49° C)	5-10 minutes
124° F (51° C)	4 minutes
125° F (52° C)	2 minutes
130° F (54° C)	30 seconds
140° F (60° C)	5 seconds
158° F (70° C)	< 1 second

Time versus temperature graph for skin scalding to occur in ADULTS



(Taken from Scalzo, 1994, adapted from Feldman et al., 1978, based on original work by Moritz & Henriques, 1947).

Infant and children's skin is thinner than adult's skin so serious burning occurs more rapidly and at lower temperatures (Scalzo, 1994). A scald burn in an infant will be more severe than the identical burn inflicted on an adult (Spillert et al., 1984). Very brief exposures to high temperatures can cause serious burns in infants and young children (Jenny, 2001). It has been hypothesized that at temperatures greater than 130° F, children can burn in one-fourth to one-half the time of adults (Feldman, 1983). Infants and children may sustain second and third degree scald burns after exposure to water for 10 seconds at 54.4° C (130° F), 4 seconds at 57° C (135° F), 1 second at 60° C (140° F), and ½ second at 64.9° C (149° F). First-degree scald burns will occur much more quickly (Renz & Sherman, 1992).

Temperature and duration of exposure sufficient to cause partial & full-thickness burns in INFANTS AND YOUNG CHILDREN

130° F (54.4° C)	10 seconds
135° F (57° C)	4 seconds
140° F (60° C)	1 second
149° F (64.9° C)	.5 second

ACCIDENTAL v. ABUSIVE BURNS BY TAP WATER

In the United States, burns from tap water are the most common form of abusive burns (Montrey & Barcia, 1985; Purdue, Hunt & Prescott, 1988). Ninety-five percent of tap-water scalds occur in the home (Baptiste, M.S. & Feck, G., 1980). When children sustain tap water scalds, a very careful examination of the circumstances is required and some kind of abuse or neglect assumed until proved otherwise (Hobbs et al., 1999). Inflicted burns place a child in grave danger of permanent injury or death. Recognition of a

burned child as being abused is the first step in protecting him from further maltreatment (Jewett & Ellerstein, 1981). At the same time, extreme care must be taken to avoid contributing to the emotional trauma of a burned child by incorrectly identifying a parent as abusive (Scalzo, 1994).

Any part of the body may be involved in an abusive burn. The location and extent of the burn (percentage of surface area involved) are not as important as the pattern in determining the probability of abuse (Jewett & Ellerstein, 1981). Some commonalities have been noted in abusive burns. Inflicted scald burns usually involve the lower trunk, buttocks, perineum, and legs. They can also appear as "stocking" or "glove" burns involving the feet and hands. Abusive burns are more likely to have a clear demarcation between burned and normal skin and to have an absence of splash marks (Renz & Sherman, 1993; Renz & Sherman, 1992). Sometimes, the buttocks and soles of the feet will be spared burning if the child's body is pushed down against the cooler surface of the tub or sink. Creases in the child's skin may also be spared, depending on the child's position in the hot water (Lenoski & Hunter, 1977).

In accidental scald burns, the child is less likely to have a clear demarcation between burned and normal skin (Hight, Bakalar & Lloyd, 1979). The burn margins are more likely to be irregular and asymmetric (Yeoh, Nixon, Dickson, et al., 1994). Accidental scald burns are rarely full-thickness burns (Hight, Bakalar & Lloyd, 1979).

There are many historical, clinical, and social clues to the abusive nature of a burn. A thorough history is critical. The most frequently mentioned clue is a discrepancy between the history offered by the child's caregiver and the burn pattern, type, or symmetry (Renz & Sherman, 1992). Other common features of non-accidental burns include the following:

- Delay in seeking medical care
- Presence of other injuries, old and new
- Previous evidence of abuse or neglect (e.g., prior indicated reports)
- History of prior "accidental" injuries
- Malnourished or failure to thrive child
- Caregiver(s) alleges there were no witnesses to the "accident" and the child was merely discovered to be burned
- Scald attributed to action of sibling, other child, or babysitter
- Burn incompatible with developmental age of child
- History provided by caregiver(s) is vague or inconsistent

(Jewett & Ellerstein, 1981; Renz & Sherman, 1992; Scalzo, 1994)

PREVENTION OF ACCIDENTAL SCALD BURNS
Scald burns can be prevented. The most effective means of preventing scald burns is to set the water heater thermostat to 120° F or below. This prevention approach does not depend on the cooperation of children or persons taking care of them (Feldman, Schaller, Feldman, and McMillon, 1978). Other common prevention tips include:

- Install water faucets and showerheads containing anti-scald technology.
- Never leave a child alone, especially in the bathroom or kitchen. If you must leave the room, take the child with you.
- Test bath water before putting a child in it. The correct temperature for infant bath water is between 96.8 and 102.2° F. Many inexpensive products are available to test bath water.
- Put the child in the bath with their back to the faucet so they can't turn the water on.
- Use back burners and turn pot handles to the back of the stove when cooking.

- Keep appliance cords out of children's reach, especially if the appliances contain hot foods or liquids.
- Keep hot foods and liquids away from table and counter edges. Never carry or hold children and hot foods or liquids at the same time.

(National Institute of Occupational Safety and Health, 2003; National Safe Kids Campaign, 2003)

INVESTIGATION OF SUSPECTED BURNS BY ABUSE

The evaluation of burns requires careful attention to historical information, physical examination, and scene investigation (Titus, Baxter & Starling, 2003). A cooperative effort between law enforcement, social services, and medical staff is needed as reliance on a single source for the history or information regarding the injuries can limit the professional's ability to correctly differentiate accidental from suspicious or intentional burns (Scalzo, 1994). All involved should consider the plausibility of the caregiver's description of how the injury occurred given a scene investigation, photographs of the child and the scene of the event, history obtained by several professionals (law enforcement, social workers, nurses, and medical personnel), physical examination, and diagnostic imaging (Scalzo, 1994).

History

The child protection investigator should get a detailed history of the injury from the caregiver, alleged perpetrator, any witnesses, and anyone else having relevant knowledge. The investigator should attempt to answer who, what, where, when, why, and how type questions. Examples of appropriate questions include: what happened, who was involved in the incident, who witnessed it, what caused the injury, what is the child's developmental stage (could the child have done what is alleged), where did the incident occur, and exactly when did the incident occur (if there was a delay in seeking treatment, why) (Smith et al., 1989).

The investigator should work with the caregiver(s) to construct a 24 to 72 hour time line of events leading up to the injury. The timeline should be a general description of activities and behaviors in the days leading up to the injury, a baseline of the family's behavior prior to the change/injury. Questions about the child's routine may be helpful: was the child eating, sleeping, and eliminating normally, was he fussy or crying, what was the caregiver's mood. A timeline can help the investigator learn what stressors or risk factors may have been present prior to the injury.

The investigator should attempt to verify information provided by an interviewee by interviewing other people with knowledge or reviewing available documents. Whenever a discrepancy in information is noted, the investigator should attempt to resolve it.

Physical Examination

A detailed physical examination of the burned child by medical personnel is mandatory. The exam should include not only the burned areas, but a total examination of the child, including diagnostic imaging. If other injuries suggestive of abuse, such as fractures, multiple hematomas, scars, or evidence of growth failure, are present, the probability of abuse increases (Jewett & Ellerstein, 1981; Scalzo, 1994). A history of prior failure-to-thrive, hospitalizations, burns, and accidents in the child being evaluated and in his siblings might elicit a pattern of repeated trauma (Jewett & Ellerstein, 1981).

Scene Investigation

The child protection investigator should conduct a scene investigation. A visit by trained social workers and detectives to the home or scene of the incident can reveal valuable data. This procedure should be requested by medical personnel before final conclusions regarding the etiology of the burn are made (Scalzo, 1994). The environmental circumstances surrounding the incident should be specifically noted. The people, objects, times, and distances should be detailed. For example, in scalds the depth of the

water in the bathtub or other container, the location of the vessel containing the scalding liquid, the temperature of the water, and the chronological sequence of the events before, during, and after the burn should be documented (Jewett & Ellerstein, 1981). Having the caregiver review the events while walking through the area and demonstrating with a doll the child's position, describing the depth of the water, and so on, helps medical personnel to determine whether the injury was accidental (Scalzo, 1994). Injury inconsistent with the history provided by the caregiver is one of the most predictive factors for inflicted injury (Jewett & Ellerstein, 1981; Renz & Sherman, 1992).

Analysis of Information

Analysis of information should be a collaborative effort between social services, law enforcement, and medical staff. Interviews and scene investigations have little usefulness if the information obtained during them is not shared and compared with information obtained by other professionals evaluating the injury. Continued analysis of information can guide the professionals in the next steps of the investigation, as well as help them reach a determination.

THE PAULSEN INVESTIGATION

DCFS Rules and Procedures for the investigation of burns were not followed in the Paulsen case. Moreover, the Rules and Procedures were inadequate to produce a thorough and accurate investigation. Two of the three components for the investigation of burns as described in the literature were neither required nor followed in the Paulsen case: no scene investigation occurred and no diagnostic imaging was conducted on Nellie.

According to DCFS Rules and Procedures, a burn investigation requires "observation of [the] environment where maltreatment occurred" (Appendix B – Procedures 300 Allegation: Burns, Section (c)(2)(E)).[18] Observation of the environment is defined in Section 300.50(j) of Procedures 300, which states that an investigator may observe those specific areas of the home reasonably related to the allegation. The section further states that in a report involving an allegation of burns/scalding, the hot water temperature at the site of the burn/scalding incident shall be measured by the investigator, regardless of whether the alleged perpetrator has admitted to the incident. Thermometers are available through the supervisor and should be taken by the investigator to the initial site/home visit (Procedures 300, Section 300.50(j)).

The child protection investigator, Tammy Feeney, observed the environment where Nellie's maltreatment occurred when she interviewed the parents at home a day and a half after the incident was reported. Ms. Feeney even felt the water in the bathroom sink and noted that it "felt very hot to the touch." However, she did not measure the water temperature and did not take a thermometer with her on this initial visit to the home. Ten days later, Ms. Feeney contacted the mother to tell her she was on her way to measure the water temperature, but when she got to the home, the mother did not answer the door. Later that evening Ms. Feeney's supervisor went to the home to discuss housing issues with the parents. Ms. Deahl told the supervisor the water had been fixed. The supervisor did not measure the water temperature to ensure that it was a safe temperature. Neither Ms. Feeney nor the supervisor interviewed building management to attempt to corroborate the mother's statement that the water temperature had been fixed. In an interview with the OIG, the supervisor stated that she thought she spoke with a police officer who reported the boiler had been fixed. However, this is not recorded in her notes or in the officer's report. The OIG

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[18] Observation of the environment is different from scene investigation. Approximately one third of the allegations require the investigator to "document parent/caregiver explanation including scene observation and mock demonstration." The procedures do no provide any instruction on how to do this.

spoke with the building manager who could not recall there ever being a problem with the water in the building being too hot.[19]

The child protective services team should not have given an opinion about Nellie's burns without reviewing a scene investigation and completing a skeletal survey (diagnostic imaging) of Nellie.

In its consult report to DCFS, the child protective services team opined:

> The history provided is consistent with the injury, indicating that this was likely an accidental scald burn. There was no delay in seeking medical care after the incident, and the parents both corroborate the mechanism of injury.[20]

The head of the child protective services team knew that evaluation of Nellie's burns required a scene investigation (including measurement of the water temperature) and diagnostic imaging. The head of the child protective services team provides second opinions for DCFS in abuse cases and in presentations to DCFS staff advocates forensic interviewing and scene investigation in suspected abuse cases. Yet, in this case she did not insist that forensic standards of scene investigation, including water temperature measurement, were met before giving her opinion. She did ask Ms. Feeney to measure the water temperature and knew that Ms. Feeney was supposed to do this. She stated in an interview with OIG staff that she should have insisted on measurement of the water temperature, but did not because she did not think she would get it.[21] She also faulted herself for not doing a skeletal survey on Nellie, which may have revealed the rib fractures discovered after Nellie's death.[22]

The head of the child protective services team felt comfortable giving an opinion that the burns were accidental based on what she knew: the pattern of the burn, the history given, consistency between the parents in the history, and the parents seeking immediate medical attention – all features of accidental burns.

Measurement of the water temperature in a burn investigation is important to determine whether a child could have been burned in the manner described by the caregiver. In this case, instead of measuring the water temperature, DCP, the police, and hospital doctors relied on reports by the parents, the child protection investigator, and police that the water came out of the faucet very hot. Yet, adults find water to be uncomfortable at temperatures around 109° F, while temperatures must be above 120° F to cause full thickness burns in a short amount of time in infants (Smith et al., 1989). Furthermore, while everyone thought the water was hot enough to burn Nellie, no one did anything to ensure that the water temperature was lowered so that it would not burn her again or burn other children or senior citizens in the building.[23]

The OIG's scene investigation of the Paulsens' apartment revealed that the water temperature in the bathroom sink measured 125° F. An adult would suffer a full-thickness burn after 2 minutes in water measuring 125° F. A child would suffer a partial- to full-thickness burn after 10 seconds in water

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[19] After Nellie was burned, the Paulsens' friend and neighbor made a complaint to the city's building department. The complaint was accepted, but promptly closed. The building department enforces a minimu m water temperature of 120° F. It does not enforce the maximum water temperature, which is 140° F.

[20] The letter was signed by the doctor for the Child Protective Services; the head of the child protective services team; and a Primary Social Worker.

[21] The head of the child protective services team reported that in prior experiences with DCFS she has had difficulty getting records, x-rays, and other information she needs.

[22] The rib fractures would have had to be caused at least two weeks prior to her burn admission for them to show up on a skeletal survey. It is unknown when the rib fractures were inflicted.

[23] According to medical records, the supervisor told the hospital social worker that DCFS would give the family a baby bath and the parents had been instructed not to bathe Nellie with any running water.

measuring 130° F. Because Nellie was only two months old, her skin was very thin, and it is conceivable that she could suffer partial-thickness burns in 125° F water in a short amount of time.

Water temperature measurement is better thought of as a component of a scene investigation. A scene investigation involves observing the scene of the incident and collecting information such as measurements and physical evidence (e.g., an object alleged to have caused an injury) and matching the information against the history provided. A mock demonstration of the incident by the persons involved in the event will help the investigator visually judge whether the incident could have happened as reported. Examination of the scene should occur as soon as possible (preferably within 24 hours of receipt of a report) to minimize any changes, intended or otherwise, to the scene. Photographs of the scene should be taken whenever possible so they can be shared with physicians and others involved in evaluating the injury. When a digital camera is not available, the investigator should diagram the findings.

The OIG conducted a scene investigation in this case and was unable to match the father's explanation for the injury with the physical findings of the scene. The father's history of the injury was that he was holding Nellie in his left arm while bathing her and his hand accidentally hit the hot water knob turning on the hot water and burning Nellie. The OIG's scene investigation revealed that the water handles turned toward the person standing at the sink. The investigator held the doll in her left arm and tried to hit the hot water handle on with both her left and right hand. She could not turn the hot water on in this manner. An attempt to turn the hot water on while holding the doll in her right arm was also unsuccessful.

This case illustrates why a scene investigation should be a basic requirement whenever a child is injured. Had DCFS Rules and Procedures been followed and the water temperature measured, doctors may still have opined that Nellie's injuries were caused accidentally. Had a scene investigation been conducted and shared with doctors – including the unlikelihood of accidentally turning on the hot water - they may have been more suspicious about the injury and required further investigation, including a skeletal survey of Nellie, before making a determination.

Following up on investigative leads provided during the Paulsen investigation may have led people involved in the investigation to be more skeptical about the father's explanation for Nellie's injuries. Leads provided during the investigation were not followed up on by the investigator or her supervisor to corroborate or contradict the theory that Nellie's injury was accidental. Two examples can be given. First, Ms. Deahl said that the woman upstairs from them also got burned by the hot water. The investigator could have asked for the woman's name and apartment number and interviewed her. Second, after Ms. Deahl told the DCP supervisor that the water temperature in the building had been fixed, DCP could have verified this with building management.[24]

Despite the fact that the Paulsen investigation was unfounded for burns by abuse, concerns were expressed about this family. Hospital personnel documented their concerns about the child's living conditions and lack of medical care in a letter to DCFS. Risk factors to this child apparent from the investigative file included:

[24] The investigator and supervisor should have been suspicious about this report already; earlier in the day, Ms. Feeney had called Ms. Deahl to say she was on her way to measure the water temperature. Ms. Deahl said okay, but when the investigator got there an hour later, Ms. Deahl did not answer the door. She did not tell Ms. Feeney at that time that the water temperature had been fixed.

- A serious injury in the first two months of life;
- A mentally ill mother (whose complete psychiatric history was unknown, but available);[25]
- A mother who previously gave up a child for adoption and who provided little to no care of Nellie (per the family's own reports);
- No medical care since birth and no medical card;
- Both parents on disability for unknown reasons;
- Worrisome living conditions (two adults and one child in a studio apartment, overheating which is a risk factor for SIDS, and possible lead exposure);
- Inappropriate bedding (the infant was sleeping in a plastic container filled with foam, a baby blanket, baby pillow, and toys- all risk factors for SIDS).

A Child Protection Manager and an Associate Deputy Director wanted the case opened for short-term services. Services were offered to the Paulsens, but they refused them.

DCFS RULES AND PROCEDURES

The OIG noted three problems with DCFS Rules and Procedures regarding water temperature measurement. First, Rules and Procedures state that if the subjects of an investigation refuse to allow the investigator to test the water, the investigator shall document his or her attempt on a SACWIS case note and make a decision to indicate or unfound the allegation based on the available information (Procedures 300, Section 300.50(j)). This section should be changed. Because of the risk of further injury or death in cases in which a child was intentionally abused, burn allegations must be thoroughly investigated (Scalzo, 1994). If a family refuses to allow the investigator to test the water, the investigator can solicit the help of law enforcement, building management, or the city's building department.

Second, Rules and Procedures state that water temperature is accurately measured by placing an approved thermometer under the running water for 90 seconds after the faucet has been on for five minutes. The Office of Child and Family Policy could not find a citation for this information and the OIG was unable to confirm that this is the accurate way to measure water temperature. According to the National Institute of Occupational Safety and Health (2003), water temperature should be measured by turning on the hot water tap, leaving it run for two minutes, and holding an outdoor or candy thermometer in the stream of running water until the temperature stops rising. In an influential study of tap water scalds in children, Dr. Kenneth Feldman measured water temperature at two minutes after turning the water on or when the water temperature stabilized, whichever occurred first (Feldman, 1978).[26]

Third, Section 300.50(j) of Procedures 300 states, "The following index identifies those water temperatures and corresponding exposure times at which scalding will occur."

110° F @ 13 minutes	130° F @ 30 seconds
120° F @ 10 minutes	140° F @ 6 seconds
127° F @ 1 minute	158° F @ 1 second

Again, the Office of Child and Family Policy did not have a citation for this information. The index identified in Rules and Procedures is the time at which *adults* will suffer full-thickness scald burns.

[25] Ms. Deahl's prior case record refers to two prior psychiatric hospitalizations. At the time of the DCP investigation, Ms. Deahl was under the care of a psychiatrist who refused to release her records even though Ms. Deahl had executed a valid consent for release. DCP could have issued an administrative subpoena for the records with the consent. This is a practice authorized by 20 ILCS 505/21 and Procedures 300, Section 300.60(h), but rarely, if ever, exercised by the Department. See Footnote 11.

[26] Both of these methods determine maximum hot water temperature. In some cases, it may be important to determine not only how hot the water got, but how fast it got there.

Infants and children burn more rapidly and at lower temperatures than adults (Scalzo, 1994). Furthermore, burns do not occur at 110° F. The lowest temperature responsible for cutaneous burning is 111.2° F; water at this temperature takes 6 hours to produce a first-degree burn (Moritz & Henriques, 1947). The information in Rules and Procedures should be corrected.

DCFS MANAGEMENT

Management has a duty to support field investigators by having tools available and in good repair that enable investigators to do their work efficiently and effectively. Recently, the Inspector General was told by DCP managers that there were no batteries for thermometers. By not ensuring that batteries were ordered and available, the managers may have sent a message to staff that measuring water temperature was not a policy that needed to be followed. DCFS should make investigative tool kits available to every investigator and encourage them to carry the kits in their cars so they are readily available when they are in the field. In the Paulsen case, had Ms. Feeney had a thermometer in her car, instead of back at the office, she may have been more likely to measure the water temperature on her first visit to the Paulsens' apartment. In this case, the OIG investigator used a thermometer, a measuring tape, and a doll for demonstration, basic tools for a scene investigation.[27]

CONCLUSION

Whenever a child is injured, a careful examination of the circumstances is required. Injury to children is concerning whether the injury is the result of abuse, neglect, or an accident. Some type of intervention is necessary in all three cases. It may range from prevention education to removal of a child. In all cases, we owe children and families thorough, skilled, and accurate investigations. Such investigations require investigators, their supervisors, and managers to have a basic understanding of the injuries being investigated and possess skills to conduct fact-gathering interviews and scene investigations, and analyze information.

Recommendations

1. Child protection trainings should refocus on objective investigative practices including, but not limited to:

- basics of fact-finding interviews, including who, what, where, when, why, and how of the incident; construction of a 24 to 72 hour time line of events leading up to the incident; and verification of information provided;
- basics of a thorough scene investigation, including documentation of observations and measurements (see video of Sharon O'Connor's presentation on forensic scene investigation) and mock demonstration (reenactment) by caregiver(s) of the incident using appropriate props (such as a lifelike doll) in the environment where the incident occurred; and
- collaborative logical analysis of information (scene investigation, interviews, and physical examination of the child) with medical personnel and law enforcement involved in investigation.

2. Procedures 300, Section 300.50(j) should be amended to correctly reflect the index of water temperatures and corresponding exposure times at which a scald will occur for *infants and children* compared to adults. Investigators should be required to hold the approved thermometer in the stream of hot water until the temperature stops rising and record the amount of time that elapsed from turning on the water until the temperature stopped rising. If a family refuses to allow the investigator to test the water, the investigator should solicit the help of law enforcement (when they are also investigating the incident),

[27] OIG Best Practice staff have been distributing dolls to DCFS and POS teams as part of their Home & Fire Safety training.

or building management or the local building department for access to the hot water heater. These procedures should be cross-referenced with Procedures 300, Appendix B, Burns.

3. Although the Legislature has provided that DCFS investigatory powers include the ability to subpoena documents [20 ILCS 505/21, and DCFS Procedures 300, Section 300.60(h) provide instructions for issuing administrative subpoenas, the practice is seldom used. DCFS should immediately issue a policy directive and/or institute remedial training to address the use of administrative subpoenas during investigations.

4. This report should be used as a training tool for child protection investigations.

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