

The Dark Figure of Infanticide in England and Wales

Complexities of Diagnosis

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Infants aged younger than 12 months have the highest homicide victimization rate of any single age group in England and Wales. In addition, there are good grounds for believing that the official homicide statistics for this particular age group are an underestimate and subject to distortion. At the same time there is evidence mounting in the United Kingdom that some parents have been incorrectly convicted of infanticide. This article first explores all recorded cases of infanticide in England and Wales for the period 1995-2002 (298 cases in total). Characteristics of the offenders, victims, offense, and court outcomes are examined. The second part of the article takes a critical gaze at the complexities involved in distinguishing infanticide from sudden infant death syndrome (SIDS) and other sudden unexplained deaths in infancy (SUDI). The article ends by considering in what ways infant deaths might be more effectively investigated.

Keywords: *infanticide; sudden infant death syndrome; dark figure; misdiagnoses of infant death; infant death investigations*

Introduction: Infanticide in England and Wales

The killing of a child or infant (through a culmination of abuse, a single violent incident, or through deliberate neglect) is perhaps the most disturbing of all homicides (Unnithan, 1997) and generally provokes considerable attention and outrage (Alder & Polk, 2001; Mouzos, 2000; Strang, 1996). In England and Wales, children (i.e., those ages 16 years and younger) constitute 13% of homicide victims (Home Office Homicide Index [HI], 1995-2002). Children are most at risk from homicide in their earliest years of life. Of the 840 children killed between 1995 and 2002, 35% (298) were younger than age 1 year (HI, 1995-2002). In fact, as a single (1 year) age group, infants

younger than age 12 months are the most vulnerable group to homicide in England and Wales; that is (as measured per 100,000 population), children younger than age 1 year are at least twice as likely to fall victim to homicide than any other age group; however, more often they are 3 or 4 times more at risk. Specifically, babies younger than age 1 year have a victimization rate of 6.3 per 100,000 population¹ compared to 3.3 for those age 24 years (the second highest victimization age group), 2.8 for those age 18 and 30 years (the third highest victimization age group), and 2.6 for those age 29 and 30 years. Victimization rates are significantly lower when we consider most other age groups. For example, infants aged 1 year have a victimization rate of 1.7 dropping to between .38 and .68 for those between ages 2 and 15 years. Adults in their forties have a victimization rate of around 1.5, and this rate generally decreases as adults become older. In short, Marks and Kumar's (1993, p. 329) assertion more than a decade ago that children younger than age 1 year are at around 4 times greater risk of becoming victims of homicide than either older children or the general population generally remains accurate if one takes the average of all other age groups.

The greater risk of homicide, not only in the first year of life but also the first day of life, is a finding supported by international literature from Australia (Mouzos, 2000; Strang, 1996), Canada (Silverman & Kennedy, 1988, 1993), and the United States (Crimmins, Langley, Brownstein, & Spunt, 1997; Crittendon & Craig; 1990; Mann, 1996). Moreover, it is generally acknowledged that the known recorded cases of infant homicide are an underestimate of the actual number of infants killed (Brookman, 2005; Creighton, 1992, 2001; Lundstrom & Sharpe, 1991; Wilczynski, 1993, 1994, 1997). Despite the particular vulnerability of infants to homicide there has not been a great deal written about infanticide in England and Wales in recent years. In this article, we explore all recorded cases of infanticide in England and Wales for the 8-year period 1995-2002 (298 cases in total).² For the purposes of this article, *infanticide* is defined as the killing of an infant younger than age 1 year, regardless of the gender of perpetrator or his or her relationship to the child—suffice it to say that in more than 70% of cases the killer is a natural parent of the baby. The legal definition of *infanticide* in England and Wales is somewhat narrower and applies when a woman causes the death of her own (biological) child younger than age 12 months while

the balance of her mind was disturbed by reason of her not having fully recovered from the effects of having given birth to the child, or by reason of the effects of lactation consequent upon the birth of the child. (Infanticide Act 1938, sect. 1)³

Characteristics of the offenders and victims are examined as well as the offense and court outcomes. In the second half of the article, we take a critical gaze at the “authorized” picture by considering the complexities involved in identifying cases of fatal infant abuse.

Infanticide: Victim, Offender, and Event Characteristics

There were 298 cases of infanticide initially recorded between 1995 and 2002 in England and Wales, which translates to an average of 37 infant homicides per year. At the time of writing, 48 of these cases (16%) were determined not to have been homicides. We return to this issue in some detail below, suffice it to say that not all suspected cases of infanticide (or any other form of homicide) are ultimately prosecuted; and, of those that are, not all suspects are ultimately found guilty. For the purposes of this article, however, we are interested in all cases initially believed to have been instances of infanticide.

Generally speaking, homicide is very much a “masculine” affair in that around 90% of offenders are male and around 70% of victims are male, and in around 60% of homicides the offender and victim are male. However, the involvement of males (as either offenders or victims) in the subcategory of infanticide diminishes somewhat in that just 57% of the perpetrators of infanticide between 1995 and 2002 were male and 57% of victims were male. Moreover, in just one “category” of homicide (or more precisely infant homicide) female offending begins to parallel that of males; the killing of an infant son or daughter. Mothers and fathers kill their own babies (biological offspring younger than age 1 year) in almost identical proportions (104 and 112 cases, respectively, between 1995 and 2002). Together these cases make up more than 70% of the total number of infanticides.

Table 1 summarizes the characteristics of victims and offenders of infanticide and of the event itself. As indicated, although females kill male and female babies in almost equal proportions, males are more likely to kill a male infant than female. This difference remains even when selecting out mothers and fathers as killers. In terms of ethnicity, Black⁴ infants are overrepresented as victims of homicide, particularly when the offender is a female. Blacks make up 2.2% of the population of England and Wales (Office of National Statistics [ONS], 2001a) yet make up 7.8% of the victims of female-perpetrated infanticide. Similarly, Black offenders are overrepresented for male- and female-perpetrated killings. Asians are underrepresented as victims and offenders as far as males are concerned. Asians constitute 4.4% of the population of England

Table 1
Offender, Victim, and Event Characteristics
of Infanticide: England and Wales 1995-2002

Male Perpetrated (154 cases)	Female Perpetrated (115 cases)
Victims	Victims
Male 62%	Male 51%
Female 38%	Female 49%
Ethnicity ^a	Ethnicity
White 86%	White 72%
Black 3.2%	Black 7.8%
Asian 2.6%	Asian 11.3%
Victim-offender relationship	Victim-offender relationship
Son-daughter 73.0%	Son-daughter 90.4%
Stepson-daughter 10.4%	Commercial 4.3%
Other known 6.5%	Other known 3.4%
Not known and/or no suspect 5.8%	Not known and/or no suspect 1.9%
Offender characteristics	Offender characteristics
Age:	Age:
Mean 26	Mean 25
Median 25	Median 23
Mode 23	Mode 22
Ethnicity	Ethnicity
White 82%	White 76%
Black 7.1%	Black 7.0%
Asian 2.6%	Asian 11.3%
Event characteristics (top four only)	Event characteristics (top four only)
Circumstances ^a	Circumstances
Child abuse 84%	Child abuse 72%
Other circumstances 3.2%	Motive U/K 10%
Reckless act 2.6%	Irrational act 6.1%
Motive U/K 5.8%	Other 8.7%
Method ^a	Method
Other 64%	Suffocation 33%
Suffocation 8.4%	Other 30%
Hit and/or kick 6.5%	Negligence and/or neglect 12%
Causing to fall 4.5%	Drowning 6.1%
Poisoning (e.g., drugs) 2.6%	Exposure and/or newborn 4.8%

and Wales, yet only 2.6% of male victims and offenders of infanticide between 1995 and 2002 in England and Wales were classified as Asian. In stark contrast, however, Asians are overrepresented as victims and offenders of infanticide where females are concerned in that 11.3% of the victims of female-perpetrated infanticide were Asian along with 11.3% of female perpetrators.

As mentioned earlier, infanticide is predominantly committed by the victim's natural parent; more than 90% of female-perpetrated infant homicides involved the biological mother. The figure is somewhat lower when we consider male perpetrators (73%) though if we combine stepfathers with natural fathers the figure rises to more than 83%. Many commentators have argued that stepchildren have an elevated risk of suffering violence (lethal or otherwise) at the hands of a stepparent. For example, Daly and Wilson (1998, p. 32) analyzed homicide data for Canada and found that children of stepparents younger than age 2 years were 70 times more likely to be killed than were children raised in genetically intact families. They argued that the story in Great Britain is much the same as in North America. The data considered here for children younger than age 1 year are more in keeping with analysis from Australia in that it is stepfathers (not stepmothers) who are of particular significance in this context (see Alder & Polk, 2001).

There are no real differences in terms of the ages of male and female perpetrators of infanticide in England and Wales, although those responsible for killing infants are somewhat younger than the wider population of homicide offenders. For example, although the average age of perpetrators of infanticide is 26 years, this figure rises to 32 years for all perpetrators of homicide. The median age for the general population of homicide offenders is 30 years (compared to 24 years for infanticide). That said, the most frequently occurring age of homicide perpetrators as a whole and those involved in infanticide are similar (20 and 23 years, respectively).

Finally, and of particular importance in the context of this article, are the significant proportions of infants who are killed as a result of suffocation or other nonspecific methods such as shaking (often termed "shaken baby syndrome" [SBS]). Whether we consider male- or female-perpetrated infanticides, around two thirds of cases are apparently the outcome of either suffocation or these other nonspecific methods. Put another way, unlike homicides involving adult victims, there is often little in the way of clear-cut physical injuries in small infants that a pathologist can link to a specific method of killing. If we consider the homicide victim population as a whole we find that around one third are stabbed, more than 11% are hit or kicked, around 9% are assaulted with a blunt instrument, and around 8% are shot. Hence, in around two thirds of homicide cases as a whole the means by which the victim meets his or her death is overt whereas in around two thirds of cases involving infants younger than age 1 year, the means is somewhat more open to debate. This is an important issue to which we return below and in part two of this article.

Finally, Table 2 indicates the court outcomes for infanticide cases for the period 1995 to 2002 in England and Wales. As indicated, approximately two thirds of cases involving a male suspect result in conviction compared

Table 2
Court Outcomes of Infanticide Cases

Male Perpetrated (154 cases)	Female Perpetrated (115 cases)
Murder 23.4%	Murder 5.2%
Manslaughter 44.8%	Manslaughter 23.5%
Lesser offense 1.3	Infanticide 21.7%
	Lesser offense 3.5%
Acquitted 11.7%	Acquitted 13.1%
Proceedings discontinued 1.9%	Proceedings discontinued 1.7%
No proceedings 2.5%	No proceedings 14.8%
Proceedings pending 11.7%	Proceedings pending 10.4%
Other 2.7%	Other 6.1%

to just more than one half of those cases with a female suspect. Moreover, males are much more likely to receive a conviction for murder than females (almost one fourth of the total male suspect population compared to just more than 5% of female suspects). In fact, almost one third of the cases against female suspects ultimately result in no conviction. We consider these cases further below.

Initially Recorded and Currently Recorded Infanticides

As indicated earlier, 48 of the 298 cases initially recorded as homicide were ultimately reclassified as a result of court proceedings (or partial proceedings). This translates to 16% of the total number of infanticides and is somewhat higher than is found for homicides as a whole, where around 10% of cases are eventually “no longer recorded” as homicide (though they remain on the HI database). There are three broad reasons why cases come to be reclassified in this manner. By far, the largest proportion are those where a full jury trial has taken place and the suspect is acquitted (just more than 70% of homicide cases as a whole and 67% of infanticide cases). Alternatively, some cases fail to reach the Crown Courts (i.e., are discharged at magistrates courts) or trials are halted partway through. In some cases, the Director of Public Prosecutions (DPP) may advise that the case is evidentially weak and/or that it is not in the public interest to prosecute (there may be issues of safety in relation to key witnesses or informers, for example; this accounts for around 16% of all homicide cases and around 20% of infanticides). Finally, some cases originally deemed to have been homicides are downgraded to lesser offenses as a result of court

proceedings, such as grievous bodily harm (GBH), child cruelty, or reckless driving (around 14% of all homicide cases and just more than 12% of infanticides).

Comparison of the 48 cases of infanticide that were reclassified (no longer recorded) with those that remain "currently recorded" (250) reveals some interesting issues. A greater proportion of infanticide cases that were ultimately determined not to have been a homicide involved a female suspect (nearly all of which were the natural mother) than a male (58% and 42%, respectively). These figures do not, however, adequately capture the distinction as they do not account for the differences in frequency of offending between males and females in the first instance. To elaborate, of the 115 infanticide cases with a female suspect, 28 were ultimately no longer recorded (24%) compared to 20 of the 154 cases involving a male suspect (13%). In addition, cases involving the natural child of the defendant were overrepresented in the reclassified cases. There are a number of possible interpretations of these findings (and we must be cautious in our interpretation of these figures because of the small number of cases of infanticide under consideration). On one hand, it might be the case that juries find it particularly difficult to convict "mothers" of killing their infants. Alternatively, it is possible that more of the cases involving female defendants lacked strong evidence leading to acquittals and/or cases not progressing fully through the courts in the first instance. Certainly, as indicated in Table 1, around one third of female-perpetrated infant homicides were the apparent result of suffocation (compared to around 8% of those cases involving a male suspect), and it is probable that such cases raise particular difficulties in terms of differentiating between a homicide and a natural death. This point is further illustrated when we consider how the victims of cases that were ultimately judged not to be homicides were killed. It is not surprising to note perhaps, the vast majority of those cases ultimately deemed not to have been the result of homicide were alleged to have involved either suffocation (31%) or nonspecific methods, such as SBS (35%). What these data begin to reveal is the very real difficulties that can exist in determining whether such young and fragile infants have died of a "natural" disorder (e.g., stopped breathing because of some undetermined medical disorder) or were harmed in some way leading to their very premature death. Unlike more robust older children or adults, little physical harm is required to kill a young infant. Hence, signs of trauma can be much more difficult to detect. It is these complexities that we begin to unravel in the remainder of this article.

In summary, infants younger than age 1 year are more likely than any other age group to fall victim to homicide in England and Wales (as measured per 100,000 population). They are most likely to be killed by a biological

parent, and “mothers” are almost as likely as “fathers” to kill their own infant whereas stepfathers are more likely to kill their nonbiological infants than stepmothers. Offenders are somewhat younger than the wider homicide offender population, and Asians are particularly overrepresented as offenders and victims of female-perpetrated infanticide. These infants are most likely to have met their death as a result of suffocation, shaking, or other nonspecific methods of baby battering. A significant proportion of infanticide cases result in acquittals, no proceedings, or discontinued proceedings—particularly where the defendant is a female.

The Dark Figure of Infanticide

It is generally argued that the police come to know about a very high proportion of homicides (Lewis, 1992; Morrison, 1995) and that any dark figure is, therefore, minimal (see Brookman, 2005, for a critique of this general view). However, the category of infant homicide is acknowledged to be the exception to this rule. In fact, the most startling finding that permeates the literature regarding infant homicide is the seemingly insurmountable problem of attempting to extrapolate the “true” prevalence of infant killings. There are a variety of reasons why the “official” picture of infant homicide fails to encapsulate the full extent of victimization. First, the body of the victim may not actually be discovered. This may be particularly problematic in cases of *neonaticide* (which can be defined as those babies killed within the first 24 hours of their life) as a result of the isolated circumstances in which such deaths occur. Often the mother will have concealed the pregnancy, is herself in a state of denial, and will be alone at the time of birth. Thus, she may be the only person aware of the victim’s existence and his or her death. As such, it is argued that neonaticide victims, in particular, are more likely to remain undiscovered and/or unidentified for long periods of time if discovered at all (Creighton, 2001; Wilczynski, 1993, 1997).

Questions can also be raised about infant fatalities in which child abuse was perhaps not the immediate cause of death; however, the maltreatment, abuse, or neglect of the infant played a significant contributory factor in his or her demise. For example, although the immediate cause of death in a child fatality may be pneumonia, this may have been a result of the severe neglect of the child (Creighton, 2001; Wilczynski, 1993, 1997). In addition, there are also (often overlooked) issues regarding the blurred boundaries between infant neglect and “accidental” death, in terms of the role of parental responsibility in the deaths of their children. For example, in their study of child

deaths in household fires in Scotland, Squires and Busuttill (1995) pointed out that although typically portrayed as “tragic accidents,” many child deaths were a direct result of adult behavior and, more specifically, could be attributed to negligent behavior. For example, they found that children were often inadequately supervised, in an unsafe environment, and on a number of occasions (i.e., in 30% of all child deaths) caretakers were intoxicated.

However, those factors that are perhaps more pertinent to this discussion revolve around the problems of diagnosis and, more specifically, misdiagnosis, in the process of establishing mode and cause of death. The subjective nature of determining and certifying a cause of death, and the inconsistent manner in which this is conducted, is a recurrent theme in the literature concerning infant fatalities (Bacon, 2000; Ballenden, Laster, & Lawrence, 1993; Berry et al., 2000; Hicks & Tomlinson, 2001; Overpeck, 2003; Wilkins, 1997). The possibility that maltreatment is misdiagnosed as some other cause of death, such as sudden infant death syndrome (SIDS), and the reluctance of pathologists to cite possible cases of abuse, means that many infant homicides may have actually gone undetected. For example, although U.S. death certificate data suggest that one infant (younger than 1 year of age) is killed every day, it has been suggested that the actual prevalence may be double (Herman-Giddens, Brown, Verbiest, Hooten, Howell, et al., cited in Overpeck, 2003, p. 19; see also McClain, Sacks, Froehlke, & Ewigman, 1993). Similar claims have been made in the United Kingdom (Marks, 2003; National Society for the Prevention of Cruelty to Children [NSPCC], 2001). To complicate matters, however, we must now acknowledge the possibility that a number of homicides (including those considered to have been SBS) may be instances of naturally occurring unexplained deaths. In short, of all the subcategories of homicide, infanticide is among the most susceptible to misclassification in terms of cause of death. In the remainder of this article we attempt to unravel the complexities involved in establishing how infants have met their death. Although the discussion concentrates on infant homicides, occasional reference, where relevant, is made to the child homicide literature more generally.

Subjectivity in Establishing Mode and Cause of Death

The key purposes of a medico-legal autopsy is to establish the mode of death as well as (where possible) cause of death. Generally four modes of death are possible: natural, accidental, suicide, or homicide (Geberth, 1996). However, distinguishing between these modes is not always a straightforward procedure and (with the exception of suicide) can be particularly difficult for those involved in the investigation of infant deaths. Similarly, discerning the

specific cause of death can also prove a complex affair; and, of course, the two (mode and cause) are in a sense inextricably linked. Emery (1985, p. 505) cited four main groups of causes of death for infants: (a) accidents, (b) poisonings, (c) nonaccidental injury, and (d) "gentle battering." Emery (1985) made the point that this latter category is difficult to identify "as victims do not show the evidence of violence characteristic of group (3)" (p. 505). For example, cases of sudden infant deaths (in which, by definition, the cause of death is unknown) are often pathologically indistinguishable from deaths involving intentional suffocation. Furthermore, even in cases where physical injury *is* present, it often remains difficult for pathologists to determine whether the injuries have been purposefully inflicted or the result of an accident. Often a parent will deny any involvement in the death and/or provide an alternative explanation for the injury that cannot necessarily be proved or disproved by the available forensic evidence and the nature and pattern of injuries present.

The problems faced in determining and certifying mode and cause of death are widely acknowledged in the literature concerning infant fatalities, and clearly the role of the pathologist is crucial. As Ballenden et al. (1993) pointed out, it is often pathologists who serve as initial "gatekeepers," in that it is their decision regarding the cause of death that will determine how a child fatality will be dealt with by the medical and legal systems. Thus, it is pathologists who actually determine whether a homicide investigation and eventual prosecution is undertaken. Ballenden et al. (1993) argued that pathologists exercise a considerable degree of discretion and, in their study, found that there were significant differences in the procedures that pathologists adopted and the cause of death diagnosed. Experience, training, and the perception they held of their role as pathologist were found to be important factors in these differences (Ballenden et al., 1993). Hicks and Tomlinson (2001) also highlighted the subjective nature of establishing cause of death, referring to it as

a process of interpretation, explanation, evidence-gathering and decision-making, rather than being something which is either straightforwardly scientific or obvious. This process can produce errors, differences of opinions, or lack of a clear explanation. . . . It means that many "grey areas" exist in an attempt to determine cause of death, and that questions remain over some deaths which appear to have been adequately explained. (p. 34)

A number of researchers have noted the complex uncertainties involved in the medical diagnoses of physical injuries and conditions, which result in

variations and inconsistencies when certifying the cause of death (Bacon, 2000; Berry et al., 2000; Dale, Green, & Fellows, 2002; Wilkins, 1997). Bacon (2000) pointed out that the cause of death will often rely on the pathologists' thoroughness, the range of investigations and tests employed in autopsies, and their interpretations of autopsy results. These factors may vary widely. For example, Berry et al. (2000, p. 100) found that different subspecialties within pathology make different use of ancillary tests in autopsies, with pediatric pathologists undertaking the most and forensic pathologists the fewest. This is particularly important, considering that the cause of death is more likely to be missed in those autopsies in which a full range of tests is not carried out. Furthermore, they found discrepancies in the cause of death diagnosed by different pathologists, whereby the diagnoses made by local pathologists were not considered as sufficient causes of death by an expert pediatric pathologist. They noted that this "misclassification" of deaths "involved both an over-interpretation of relatively minor pathological changes and a failure to identify the significance of real pathology (e.g. fractures)" (Berry et al., 2000, p. 108). In short, the potential for disagreement between, and among, doctors, pathologists, and coroners is significant. Consequently, as Guileyardo, Prahlow, and Barnard (1999, p. 290) argued, there will be inconsistencies in decisions regarding whether a classification of "homicide," "accident," or "undetermined" is appropriate. In addition, a number of commentators have referred to preferences in the use of certain diagnostic labels. Wilkins (1997), for example, pointed to the tendencies of some pathologists to resist a diagnosis of abuse, whereas others display an overenthusiasm to do so. This has become particularly pertinent to cases of SIDS.

SIDS

SIDS is, by definition, a diagnosis of exclusion, whereby the cause of death in such cases remains undetermined. Beckwith referred to SIDS as "The sudden death of an infant or young child which is unexpected by history and in whom a thorough necropsy examination fails to demonstrate an adequate cause of death" (cited in Hobbs & Wynne, 1996, p. 156). SIDS was introduced as a registerable cause of death in the United Kingdom in 1971. It comprises a subcategory of sudden unexpected deaths in infancy (SUDI) and "ill-defined deaths" (Fleming, Blair, Bacon, & Berry, 2000; Hobbs & Wynne, 1996) and accounts for the largest single category of deaths in England and Wales for infants between the ages of 1 month and 1 year (Bacon, 2000). Statistics from the United States (Anderson & Smith, 2003, 2005; National Center for Health Statistics, 2004), Canada (Health Canada, 2003; Public

Health Agency of Canada, 1998, 1999), and Australia (Al-Yaman, Bryant, & Sargeant, 2002; Australian Institute of Health and Welfare [AIHW], personal communication, April 4, 2005; Child and Youth Health, 2002, 2003) all similarly indicate that although the rate of SIDS has declined considerably during the past decade, it remains the leading cause of death for postneonatal infants (i.e., those aged between 1 month and 1 year) and constitutes the third largest category of infant death overall in these countries.

Since its introduction, doubts have been raised over the labeling of sudden infant deaths (Creighton, 2001), primarily because of the fact that SIDS deaths are often pathologically indistinguishable from those in which the child has been intentionally suffocated (Creighton, 2001; Newlands & Emery, 1991). In such cases there may be no obvious external injuries to the face or body and no physical or suspicious signs of child abuse (Meadow, 1999). Thus, many call for the abolition of the term as a cause of death in preference for the already existing classification of “undetermined/unascertained” (Green, 1999). For example, Meadow (1999, p. 7) argued that the diagnostic label of *SIDS* has become counterproductive requiring “revision or abandonment.”

Certainly, there appears to be much confusion surrounding the SIDS label, even within the medical profession. For example, in their small-scale study, Ballenden et al. (1993) noted that pathologists displayed differences in their understanding of, and confidence in, the diagnosis of SIDS. In addition, they found that some felt under “social pressure” to use the SIDS classification, as opposed to more specific findings as to the cause of death (Ballenden et al., 1993), although Bacon (2000) suggested that the reverse may be true and that some pathologists and coroners prefer terms such as “cardiorespiratory failure” or “unascertained.” Other researchers have argued that the SIDS term is used to avoid a more thorough autopsy, to “mercifully” conclude investigations where child abuse may be suspected (Nam, Eberstein, & Deeb, 1989) and to “avoid awkward truths” (Meadow, 1999, p. 12). It is suggested that SIDS has become synonymous with a natural death (Hobbs & Wynne, 1996; Meadow, 1999) and is thus a “seductive” diagnosis—one that protects parents and professionals, absolving them from all sense of guilt (Emery, 1993b). Similarly, Reder and Duncan (1999) and Wilczynski (1994, 1997) have pointed to a general reluctance on the part of pathologists and coroners to act on suspected cases of filicide, particularly in ambiguous situations where there is no conclusive proof to support their suspicions (as can be the case in many instances of SIDS). In support of this view, Dingwall (1989, p. 163) referred to the “rule of optimism” employed in uncertain situations regarding child protection decisions, in which the symptoms and signs that least stigmatize parents are preferred over and above other possible alternatives.

Wilczynski (1994, 1997) pointed out that professionals do not want to jeopardize their future relationship with the family and referred to evidence suggesting that they are less likely to suspect (and report) abuse in cases in which they have a closer relationship with the family. Wilczynski (1994, 1997) also suggested that professionals may be concerned about the implications of such allegations on their careers.

Estimates of Homicides Masked as SIDS

The genuine difficulties that can arise in ascertaining how some infants have died, along with possible reluctance on the part of pathologists to cite maltreatment and abuse, has led many commentators to suggest that some homicides are being incorrectly classified as SIDS or SUDI. Attempted estimates of the proportion of SIDS cases that might actually have been homicides have varied enormously. At an inquest in 1984, Home Office pathologist Dr. Donald Wayte asserted that the majority of SIDS cases were, in fact, filicide. Although there is no evidence to support such a statement, a vast number of commentators acknowledge the likelihood that in a small proportion of SIDS cases, this may well be the case. Findings from the United States have ranged from a minimal detection rate of 1.3% of SIDS cases that were found to be the result of child abuse and neglect to a higher figure of 4.7% (the latter involving a systematic review of SIDS deaths; McClain et al., 1993). In the United Kingdom, Emery (1985) estimated that between 2% and 10% of SIDS deaths could be attributable to homicide, although more recently he increased his estimations to between 10% and 20% (Emery, 1993a). Emery and Taylor (1986) suggested that 1 in 10 SIDS cases may be due to intentional suffocation, and similarly, Newlands and Emery (1991) found that deaths associated with child-abusing families (but that have been diagnosed as SIDS) accounted for approximately one tenth of all SIDS cases. Furthermore, Green (1999) commented that "in private conversation, many paediatric pathologists and forensic pathologists say that parental or adult intervention may have occurred in 20-40% of the cases of so called sudden infant death syndrome with which they are involved" (p. 697).

The most comprehensive study that has been conducted to date concerning SIDS is the Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) Studies, which covered England, Wales, and Northern Ireland (Fleming, Blair, Bacon, & Berry, 2000). The study identified and investigated all SUDI for the period 1993 to 1996. They found a number of cases in which parental action, or inaction, played a part in the deaths of those children they studied (i.e., children between ages 7 days and 2 years). Specifically, among

the 346 cases that were thought to be (and thus labeled as) SIDS, Fleming, Blair, Bacon, & Berry (2000) found that maltreatment was probably the main cause of death in 22 (6.4%) and a secondary or alternative cause in a further 28 (8.1%). Hence, somewhere in the region of between 6.4% and 14.5% of SIDS cases may have been incorrectly classified. Furthermore, this excludes all those cases that were subject to a police investigation at the time of the study. Overall, of those SUDI deaths investigated, the researchers found that maltreatment was either the main cause of death or a secondary cause of death in 13.7% of cases. If those cases subject to a police investigation are also taken into account, then this figure rises to 17% (Bacon & Tripp, 2000).

Using data concerning SIDS from the Office of National Statistics (ONS, 2000, 2001b, 2002, 2003) and drawing on Emery's (1985) estimations that 2% to 10% of SIDS cases could be misdiagnosed homicides, we can estimate that between 49 and 246 homicides may have been misdiagnosed as SIDS during the period of 1995-2002.⁵ Taking a middle ground of 5%, this would be an additional 123 infant deaths that could, in reality, be infant homicides. This translates to a further 15 infant killings per year and accounts for almost one half of the average number of infanticides (37 cases) initially recorded for this 8-year period (i.e., would lead to more than a 40% increase). Using those estimates cited in the CESDI Studies by Fleming, Blair, Bacon, & Berry (2000) of between 6% and 14%, the numbers of infant killings that have been diagnosed as SIDS could lie somewhere between 147 and 344 deaths. Once more, taking a midpoint of 10%, a further 246 infant deaths could be added to the existing figure of 298 (initially recorded) infant homicides for the period 1995-2002. This translates to an additional 31 deaths per year and nearly doubles the existing number of infanticides recorded each year during the period 1995-2002. Furthermore, it should be noted that each of these calculations is based on the most conservative estimates of the proportion of homicides that are likely to have been incorrectly assigned a SIDS label. Although there is little doubt that there exists a dark figure of infanticide, it is also the case that some apparent homicides (including those considered to have been SBS; see, e.g., Geddes & Plunkett, 2004) may, in fact, be instances of naturally occurring unexplained deaths.⁶ That said, on balance, the available evidence would suggest that there are many more hidden infant homicides than cases of wrongful conviction.

Conclusions and Recommendations

This article began by charting what is known about infanticide in England and Wales based on data held on the Home Office HI. We then moved on to

consider the complexities involved in actually determining whether an infant death is the result of some “natural” disorder (e.g., SUDI or SIDS) or the result of harm inflicted on the child (i.e., a homicide). Clearly, because of the particular difficulties involved in accurately determining the cause of infant deaths, it is vital that every case is investigated in the most rigorous manner. Yet a number of commentators have argued that the present arrangements for the investigation of infant deaths are inadequate and should be revised (Epstein & Sherratt, 2001; Fleming, Blair, Bacon, Ward-Platt, & Berry, 2000; Hey, 2003; Limerick, 1999; Meadow, 1999).

Fleming, Blair, Bacon, Ward-Platt, et al. (2000) strongly recommended that the Home Office and the Department of Health review and revise the present system of infant death investigation and the procedures that follow sudden unexpected infant deaths. They contended that such procedures vary widely in different areas and stressed the need for a standard national approach to the investigation of sudden infant deaths (see also Byard & Krous, 1999; Reeder & Nicol, 2004; and Centers for Disease Control and Prevention, 1996, with regards to similar claims in the United States). Fleming, Blair, Bacon, Ward-Platt, et al. argued that there are deficiencies in the collection of all relevant material pertaining to the circumstances of death, the postmortem examination, and the accurate certification of death. They argued that all postmortem examinations of sudden unexpected infant deaths should be carried out by a pediatric pathologist (or a pathologist with special training and expertise in pediatric pathology) who has been fully briefed on all of the relevant information collected by and from the various parties involved. They pointed out that in the CESDI Studies “SUDI pathologists concluded that such a briefing was the single most important factor in enabling them to make a correct diagnosis, but under present arrangements it is often badly deficient” (Fleming, Blair, Bacon, Ward-Platt, et al., 2000, p. 145). As a result, opportunities for establishing the “true” cause of death are not fully exploited and official statistics relating to infant fatalities and their causes may be wrong.

Most important, Fleming, Blair, Bacon, Ward-Platt, et al. (2000) emphasized the value of multidisciplinary case discussions, attended by all of the relevant professionals involved, within 2 to 3 weeks of every unexpected death. Indeed, the successful implementation of Child Death Review Teams (CDRTs) in many states of the United States, Canada, and Australia has led to calls for their more widespread introduction (Creighton, 2001; Durfee & Tilton-Durfee, 1995; Newell, 2001; Reeder & Duncan, 1998; Wilczynski, 1997, 2001). They involve a multidisciplinary multiagency approach, composed of representatives from a broad range of relevant fields including child protection, law enforcement, public health, pediatrics, pathology, and mental

health (U.S. Advisory Board on Child Abuse and Neglect [USAB], 1995; Wilczynski, 1997). The functions of CDRTs are to create and maintain a detailed register of all child deaths, to conduct detailed reviews of child deaths that are due to maltreatment or abuse (or where this is suspected), and to analyze the data to identify broader patterns, trends, and social factors that may have contributed to the deaths, to develop preventative strategies (Newell, 2000; USAB, 1995). The USAB (1995) described CDRTs as one of its richest sources for understanding child killings. Moreover, it has been argued that CDRTs are important in helping to fully quantify the extent of child deaths through abuse and neglect and “appear to be one of the most effective means of minimizing the ‘dark figure’ of child-killing” (Wilczynski, 1997, p. 219).

In conclusion, there is little doubt that the business of determining how infants have met their death is a complex and oftentimes contested area. Far from being based on hard indisputable “facts,” infant death investigations involve subjective interpretation of the available evidence, albeit cloaked in the garb of so-called medical evidence or expert opinion. Without significant improvements in infant death investigative procedures, we are likely to remain somewhat in the dark as to the “real” cause(s) of a significant number of infant deaths. Moreover, in the absence of reliable evidence as to cause of death, there is a greater chance that social pressure and processes will affect the outcome of death certification as the medical profession and other infant death investigators adopt either an attitude of suspicion (i.e., “think dirty” and classify as a homicide) or caution (and opt for a SUDI or SIDS label).

Notes

1. The victimization rate for babies younger than age 1 year was calculated by determining the average number of babies killed in a year throughout the 8-year period 1995-2002 (37 babies) and dividing by the population of younger than age 1 year as determined by the 2001 census (586,295) and multiplying by 100,000. Taking the average number of infant deaths during the 8-year period is arguably the most accurate method of calculating the victimization rate. It is perhaps worth noting, however, that the rate alters quite significantly at individual years during this period. For example, in 2000, 52 babies fell victim to homicide (the highest number during this period) producing a victimization rate of 8.869 per 100,000 population. In contrast, in 2001 only 19 infants fell victim to homicide producing a rate of just 3.24 per 100,000 population. Finally, if we consider currently recorded infanticides as compared to initially recorded (i.e., 250 cases instead of 298) the victimization rate emerges as 5.287. However, for the purposes of the comparative rates provided above all rates have been based on initially recorded homicides.

2. Details of each of these cases was ascertained by analysis of the Home Office Homicide Index (HI)—a database of all known homicides committed in England and Wales that is held and maintained by the Home Office and forms the basis of the national homicide statistics.

3. The Infanticide Act provides that a woman found guilty of infanticide should be dealt with as though guilty of voluntary manslaughter.

4. As defined by the Office of National Statistics as Black Caribbean, Black African, or Black British.

5. The Office of National Statistics (ONS) provides data concerning the occurrence of sudden infant deaths in England and Wales in their *Health Statistics Quarterly* publications. These reports document the prevalence (in terms of numbers and rates) of sudden infant death syndrome (SIDS) cases involving infants (i.e., those aged up to 11 completed months of life), in which mention of "sudden infant death," "SIDS," "cot death," "crib death," or a similar term appears anywhere on the death certificate. Such statistics indicate that between 1995-2002, there were 2,457 sudden infant deaths involving 1,496 male infants (60.9%), and 961 female infants (39.1%; ONS, 2000, 2001b, 2002, 2003).

6. In the United Kingdom, for example, a number of mothers have recently had their convictions for infanticide overturned (generally because of criticisms regarding expert medical evidence). Among the most notable cases are Sally Clark, Angela Canning, and Trupti Patel.

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