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Researchers Stunned By Scope of Slayings: Further Studies Needed, Most Agree

By Donna St. George, Washington Post Staff Writer

In the mid-1990s, Cara Krulewitch sat in a dark, cramped file room in the office of the D.C. medical examiner, poring over autopsies for days that became weeks, then months. She was an epidemiologist with the Centers for Disease Control and Prevention, assigned to the District.

Krulewitch wanted to see whether maternal deaths were being undercounted, as was common elsewhere across the country. Granted access to confidential death files, she assumed she would find more deaths from medical complications of pregnancy – embolism, infection, hemorrhage – than anyone knew.

What she stumbled upon instead was a surprising number of homicides: 13 of 30 maternal deaths, more than 40 percent. “I was just stunned,” she recalled. “You assume it’s a quirk in the numbers. A blip.”

Krulewitch dug into medical archives and came across a 1992 journal article from Chicago and a 1995 study from New York City. In both, homicide had emerged as a significant cause of maternal death. It was difficult for the uninitiated to comprehend: Were pregnant women being killed in notable numbers?

“I didn’t understand it at all,” said Krulewitch, whose study was published in the *Journal of Midwifery & Women’s Health*.

Her research came at a time when maternal mortality rates in the United States had fallen a full 99 percent from the last century, with fewer than 500 women a year dying of medical problems related to childbearing.

Health officials considered this a major achievement but also had set optimistic new goals to bring the death toll closer to what is called an irreducible minimum.

Still, there was a growing interest in doing a better job of capturing every possible case – and taking note of homicides, suicides, car accidents and drug overdoses. In the larger public health world, the “social” causes of death were increasingly viewed as an important health issue.

“For a long time, violence was not defined as a public health problem,” said Jacquelyn Campbell, who studies domestic homicides at Johns Hopkins University.

Even now, studies that analyze maternal homicide are relatively rare.

One of the most comprehensive studies came from Maryland, where researchers used an array of case-spotting methods, expecting to find more medical deaths than the state knew about. Instead they discovered that homicide was the leading cause of death, a finding published in 2001 in the *Journal of the American Medical Association*.

In 2002, Massachusetts weighed in with a study that also showed homicide as the top cause of maternal death, followed by cancer. Two of three homicides involved domestic violence. “This is clearly a major health problem for women,” said Angela Nannini, who led the study.

Still, many questions remain unanswered.

“We don’t even know what we don’t know yet,” said Elaine Alpert of Boston University. “We need to look not only at all the contextual factors that may have contributed to a mother’s death, but also look to compare deaths and see commonalties between these cases.”

On the federal level, the CDC has done its first study of maternal homicide using national data to examine the risk by age, race and start of prenatal care. While that study awaits publication, CDC officials said they had no national numbers on maternal homicide but did release a slide presentation, which reported 281 cases in 16 southern states and the District from 1991 to 1997.

The CDC has started a program to compile and analyze detailed characteristics about violent deaths across the country – the National Violent Death Reporting System – but it does not uniformly note maternal status in homicides.

In the latest wave of research, experts have used an expanded definition of what qualifies as deaths associated with pregnancy – up to 12 months postpartum – with the idea that some troubles surface after pregnancy ends. Postpartum depression, for example, may play a role in suicide cases. Likewise, homicides can be related to the “chain of events” started by a pregnancy.

In a CDC study of postpartum mothers, those younger than 20 were almost three times as likely to be homicide victims as their counterparts who were not recently pregnant.

Health experts say the better they understand maternal homicide, the better they can tailor efforts to prevent harm during that pivotal time. Most women see doctors repeatedly during pregnancy – when, the thinking goes, there is a chance to help.

“It’s a time when women are open, they are very receptive to information, and they are interested in protecting their children,” said researcher Judith McFarlane of Texas Woman’s University.

Some criminologists, such as Neil Websdale of Northern Arizona University, say there is a risk in overstating the problem. Websdale pointed out that more than 1,000 women a year are killed

in domestic clashes, the overwhelming majority of whom are not pregnant. But Jack Levin of Northeastern University stressed the counterpoint. "This should not have to become an epidemic to get the public's attention," he said.

Determining the precise risk of homicide for new and expectant mothers is not easy, said researcher Isabelle Horon, because the number of pregnancies in a year is unclear. In Maryland, Horon and her co-author instead ranked leading causes of death. Homicide came in fifth for all Maryland women ages 14 to 44 who had not been recently pregnant. For those who were or had been recently pregnant, homicide was first.

After making statistical adjustments for age and race, the Maryland researchers found that pregnant women and new mothers were still almost twice as likely to die of homicide as their counterparts who had not recently been pregnant.

Staff researcher Bobbye Pratt contributed to this report.

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