

Medical Murderers

The Mystery of the Clarksburg VA hospital



Nurse Charles Cullen worked at nine hospitals in New Jersey and Pennsylvania, killing dozens of patients by spiking saline IV bags with deadly doses of drugs physicians did not order and patients did not need. Donald Harvey, who worked as an orderly among other hospital jobs, roamed units at three hospitals in Cincinnati and Kentucky where he killed more than two dozen patients. The health care killers used insulin, heart drugs or poisons such as cyanide. They had access to frail patients on hospital floors. Ultimately, they were convicted of murdering patients under their care. As investigators assemble clues in at least two homicides and at least eight other suspicious deaths at a Clarksburg, West Virginia, Veterans Affairs hospital, past examples of health care workers who killed patients with unneeded medications — including insulin, the drug suspected in the VA deaths — show how difficult such cases can be to detect and prove.

Cullen moved from hospital to hospital, taking new jobs when managers began to suspect his deadly ways. Although investigators collected forensic evidence implicating him, prosecutors did not charge him until a fellow nurse, wearing a wire, coaxed a confession. Harvey's arrest was a matter of luck. He used cyanide to poison a man hospitalized after a motorcycle crash, unwittingly triggering an Ohio law requiring autopsies on all motorcycle fatalities. The medical examiner who performed the autopsy had a genetic ability to smell cyanide, which triggered the investigation.



In this Sept. 1987 file photo, serial killer Donald Harvey stands before a judge during sentencing in Cincinnati. Harvey, who was serving multiple life sentences, was found beaten in his cell Tuesday afternoon at the state's prison in Toledo, state officials said. He died Thursday morning, said JoEllen Smith, spokeswoman for Ohio's prison system. He was 64.

There are no formal statistics tracking the number of health care workers convicted of murdering patients. Such cases are distinct from medical errors in which doctors, nurses or other clinicians inadvertently harm or even kill patients through carelessness or mistakes. These serial killers are often called "angels of death," but those familiar with their behavior say the moniker rarely describes their crimes. More often, they kill with intent and out of compulsion, not compassion. Elizabeth Yardley, a criminology professor at Birmingham City University in England, studies nurses who kill. In a 2014 research paper, she identified 16 convicted of murder over the past four decades in the United States, Belgium, Finland, France, Germany, Italy and the United Kingdom.

Healthcare serial killers

Cases studied in Elizabeth Yardley's 2014 research paper about nurses who committed serial murders.



Kimberly Saenz



Charles Cullen



Vickie Dawn Jackson



Orville Lynn Majors

Name	Gender	Year*	Country	Murders**	Hospital Department
Aino Nykopp- Koski	Female	2009	Finland	5	Not Known
Kimberly Saenz	Female	2008	USA	5	Dialysis unit
Irene Becker	Female	2006	Germany	5	Cardiology Ward
Petr Zalenka	Male	2006	Czech Republic	7	Anaesthesiology, Resuscitation
Stephan Letter	Male	2004	Germany	12	Internal Diseases
Benjamin Geen	Male	2004	UK	2	ER
Sonia Caleffi	Female	2004	Italy	5	Intensive Care Unit
Charles Cullen	Male	2003	USA	29	Coronary Care Unit, Intensive care

Name	Gender	Year*	Country	Murders**	Hospital Department
Colin Norris	Male	2002	UK	4	Orthopaedic Wards
Vickie Dawn Jackson	Female	2001	USA	10	N/A—Small hospital
Christine Malevre	Female	1998	France	6	Palliative Care Unit
Kristen Gilbert	Female	1996	USA	4	Intensive Care Unit
Orville Lynn Majors	Male	1995	USA	6	Intensive Care Unit
Beverley Allitt	Female	1991	UK	4	Children’s Ward
Robert Rubane Diaz	Male	1981	USA	12	Intensive Care Unit
Cecile Bombeek	Female	1977	Belgium	3	Geriatric Ward

* Year of conviction

** Number of murder convictions, in many cases the actual number of victims could be much higher

Insulin was the drug most frequently used to poison patients. But health care killers also used sedatives, muscle relaxers, blood thinners, heart drugs and even bleach. Some started with one drug and moved to another as the pace of their killings increased. In most cases, the killers poisoned patients with drugs taken from the hospital where they worked. Some nurses had legitimate access to the medicines. Others stole the drugs, bypassing safeguards to secure medication. “This is the challenge of investigating homicide in a health care setting — the suspects you are looking at are members of a staff,” Yardley said. “Those members have legitimate access to victims. They have the opportunity to harm them. “It can be an investigative nightmare.”

'You can't prove anything'

Cullen’s string of suspicious deaths began in the late 1980s, after he landed his first nursing job through a staffing agency at Saint Barnabas Medical Center in Livingston, New Jersey. As recounted in the book “The Good Nurse” by journalist Charles Graeber, Saint Barnabas nurses in February 1991 noticed two patients in the hospital’s critical care unit mysteriously crashing from low blood sugar levels. The patients appeared to get better as soon as they were disconnected from an IV bag. Hospital security staff discovered the IV bags contained insulin, which wasn't ordered by doctors. Investigators found small needle marks on the perimeter of the bags. A review of records uncovered reports of several patients unexpectedly crashing from hypoglycemia.

Making the case for foul play was not easy. The patients had a range of health conditions that made them vulnerable, and completing a complex medical investigation proved difficult. Hospital security installed cameras in the medical storage room and the administration tightened requirements for staff accessing insulin. Cullen was interviewed about the tampered IV bags but he was defiant. According to “The Good Nurse” he told security, “You can’t prove anything.”

Cullen was right. Though the hospital suspected him, it lacked evidence to prove he sabotaged IV bags by injecting insulin, “sending them out like grenades” to vulnerable patients, as Graeber wrote. And when security informed the local police department, the department’s chief had little interest in taking on the case.

Saint Barnabas moved Cullen off the work schedule. He easily found another nursing job, a pattern that continued over the next decade and a half at hospital after hospital.

The hospitals did not collect meaningful evidence. They did not publicly report “sentinel events” — unexpected incidents involving death or serious injury — even though they were required to under federal Centers for Medicare and Medicaid rules for all participating hospitals. “He was caught over and over again, or at least suspected strongly enough that he was removed from the hospital,” Graeber said. “What happened time and time again is he was moved on with neutral or positive references.” Cullen's actions

finally caught up to him at New Jersey's Somerset Medical Center, after four people died from non-prescribed doses of insulin and the heart drug digoxin. He was suspected, but the hospital wanted to conduct its own probe before notifying outside investigators.

More patients died before Somerset administrators, under pressure from the director of the state's poison control center, finally went to police. Detectives, however, could not gather enough forensic evidence to seal the investigation. They convinced a nurse who was friendly with Cullen to wear a recording device. During a conversation, Cullen told her he wanted to "go down fighting." He confessed, pleaded guilty to killing 13 patients at Somerset and agreed to cooperate with authorities in lieu of the death penalty. He was sentenced to life in prison. It's unknown how many people he killed during his nearly two decades of nursing. Cullen told detectives he killed as many as 40, but Graeber's research put the likely death toll at about 400.

Before he was arrested, Cullen knew Somerset suspected him in the string of deaths. He was preparing to move on to another hospital like he had so many times before. "Cullen had another job lined up," Graeber said. "It really did take a confession to be able to put him away. Everything else was circumstantial, difficult to prove."

Testing for insulin is tricky

Vincent Marks, a pathologist and retired University of Surrey professor, is among the world's foremost experts on insulin killings. He became interested in low blood sugar, or hypoglycemia, as a doctor in the late 1950s. He discovered a patient with unexplained low blood sugar had a tumor that was secreting insulin. He went on to write the book, "Insulin Murders: True Life Cases." He said the first known case of insulin murder occurred in 1957 and involved an English nurse, Kenneth Barlow, who was convicted of poisoning his wife. "He was successful, but he didn't really succeed," said Marks. "It takes such a long time to die from insulin poisoning. He gave up and drowned her."

To prove homicide by insulin, Marks said investigators need foresight to collect the right evidence and perform the right tests in a timely manner. Blood must be drawn while the patient is alive or within hours of death, he said, and both the presence of insulin and an absence of C-peptide, which measures insulin made by the body, must be detected. Immunoassay tests commonly used to measure insulin might not be sensitive enough to prove fatal insulin doses. A newer technology, called mass spectrometry, is often required but rarely used, Marks said. "Unless they actually have thought about it and collected the blood ... done the tests during life or immediately after death, and used the best possible methods, it can be deceptive," he said. "It is extremely difficult to prove."

It's especially important to use correct testing when a victim is injected with insulin analogs, a newer synthetic form of insulin preferred by many people with diabetes, Marks added. "If you can identify an analog in somebody's blood, or vitreous (eyeball tissue) you know somebody has been doing something they shouldn't have done," he said. "If you find natural insulin, you can't be sure whether it is from the bottle or from somebody's own body."

As part of the recent investigation into the suspicious deaths at the West Virginia VA hospital, the bodies of Army veteran Felix Kirk McDermott, 82, and Air Force Veteran George Nelson Shaw, 81, were exhumed. Both deaths were classified as homicides. A federal medical examiner concluded insulin was injected into McDermott's abdomen and Shaw's autopsy revealed injection sites tested positive for insulin. Neither man had diabetes. The insulin injections sent the blood sugar levels of both veterans crashing to fatally low levels.



Authorities are investigating 10 suspicious veteran deaths at the VA hospital in Clarksburg, West Virginia. One of them was Air Force veteran George Nelson Shaw Sr. on April 10, 2018 (right) whose death was ruled a homicide by an Armed Forces medical examiner. It's one of 10 deaths under investigation by authorities.

Family members interviewed by investigators say they were told a person of interest, who has since been removed from patient care, may have been responsible for the deaths of as many as 10 patients on Unit 3A by insulin injection. The person has not been charged. Marks said he is not familiar with the specifics of the West Virginia cases, but noted investigators face an enormous challenge building a case solely on forensic evidence. “It (insulin) disappears quite rapidly once somebody dies,” he said. “I am very skeptical about this idea of exhuming bodies and finding insulin.”

'They want it swept under the carpet'

Cases of health care workers poisoning patients with insulin are rare. Most nurses convicted of mass murder carried out their killings in the 1990s and 2000s, Yardley found, and many exhibited “red flag” behaviors.

The killer nurses had higher death rates on their shift, struggled with mental instability or depression and made colleagues feel anxious. They also were more likely to volunteer for the night shift and move from hospital to hospital. Frequently changing jobs might be a sign that the nurses left jobs when their actions became suspicious, she noted. “It could be the case that they have killed before and it hadn’t been detected,” Yardley said. “Very often, hospitals want to be very careful with their public relations. They don’t want patients to know there had been some type of issue like this. They want it swept under the carpet.”

Harvey, the Cincinnati orderly and nursing assistant, had been on his third hospital job when he was arrested and charged in 1987. His health care career included stints at a London, Kentucky hospital, the Cincinnati VA Medical Center and finally Drake Hospital in Cincinnati. A man named John Powell crashed his motorcycle and soon found himself on Harvey’s floor. Powell’s injuries were not life threatening until Harvey put cyanide and water in a feeding tube. Like all motorcycle crash victims in Ohio, Powell was autopsied — and a deputy coroner happened to have a genetic ability to smell cyanide. “It was pure luck,” Hamilton County Prosecutor Joe Deters said.

Harvey confessed and pleaded guilty to killing 37 people at the three hospitals using cyanide, arsenic, insulin and other substances. In media interviews, he admitted to killing even more patients. “He initially claimed it was a mercy killing,” said Deters. But a psychiatrist concluded, “he liked to kill people. This is not a mercy killing. He has a compulsion to kill.” Harvey died in 2017 after a beating by another inmate at an Ohio state prison.

Deters said investigators learned Harvey was fired from the VA for storing organ samples in his locker, but Drake Hospital never checked his work history. After the murders were uncovered, the administrator changed his application to make it appear the hospital had checked with past employers. The hospital administrator was charged and convicted for doctoring the application.

Graeber's research on Cullen showed a similar pattern. Hospitals where he worked often delayed reporting sentinel events that should have triggered an investigation by state health department inspectors. "There is always going to be one bad guy out there in any field," Graeber said. "You have institutions that are supposed to safeguard their people and not prioritize limiting liability."

In Clarksburg, veterans and family members want answers about the suspicious deaths at Louis A. Johnson VA Medical Center. They've questioned the hospital's oversight. They've grown frustrated with the pace of the investigation. Debbie Cutler is the daughter of a Korean War veteran John Hallman, 87, who died in June 2018 after a night at the Clarksburg VA hospital. Federal agents told the family he died under suspicious circumstances with his blood sugar plummeting. His death has not been classified as homicide. "There hasn't been any arrest – that's what we're still waiting for," Cutler said. "They are working on having a rock-solid case against this person. That is what they tell us every time we talk to them. We will have to be patient and wait."

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