

Chapter 14.

SABOTAGED Drug Administration, INTENTIONAL DRUG ERRORS in Anesthesia and STATE CHEMICAL EXECUTION.

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(These are the first 15 pages from the printed book's full chapter.)

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1. INTRODUCTION.

It is a surprise to ordinary people that intentional drug administration errors occur in anesthesia practice. They are rare but real¹. In the fuller breadth of medical care, most typically intentional medication administration errors are only suspected when many cases have accumulated. Individuals creating intentional drug errors usually do not feel anger towards the victim patient. They feel pathological anger toward another person or persons. They wish those others to bear the consequences of the intentional patient harm they cause. The phrase “error” implies an unintentional action committed where the wrongness of the deed was not the prime motivation. This chapter, however, will use the phrase “*intentional medication error*” or “*intentional drug error*” as synonyms for **Medication administration sabotage**.

An editorial from 2022 on the terminology of anesthesia medication administration errors noted that no society, professional body, or researcher had ever included any definitions for Medication Administration Sabotage or similar terms².

An isolated single *medication administration sabotage* may never be recognized, although terrible but unexplainable harm may be done to the innocent patient. However, when the criminal person carries out their crime on multiple patients, it is often precisely the same crime each time. Eventually, associated persons will recognize unusual adverse event patterns in patients. Then, it becomes possible to suspect intentional harm to patients and uncover the full explanation.

Nearly all known *series of strange patient adverse events* within a period within one institution cases involved creating a sabotage willful drug or injectable substance mis-injection. The crimes are rarely strongly proven with strong forensic evidence, and a balance of probability must be used to secure a criminal conviction.

The term *INTENTIONAL DRUG ERRORS* is non-sensical as the words “intentional” and “error” are opposite concepts. The term is, however, used in this book to discuss adverse anesthesia patient events that are recognized as WRONG ADMINISTRATIONS OF

anesthesia drugs, and then belated recognizing the adverse event(s) was not an unintentional human error of the anesthesiologist but a sabotage event set up by another person to make the anesthesiologist appear to be the one who made the error. The patient is the ultimate victim, but the anesthesiologist is the main target of the criminal act.

2. **LEGITIMATE MURDERER EXECUTION USING ANESTHESIA DRUGS: CHEMICAL EXECUTIONS.**

The medical killing of people can be criminal or non-criminal. Non-criminal legitimate execution via medical killing is when a governing authority approves lethal injection execution for the capital punishment of sentenced criminals. There are many controversies related to the *inefficiency* of lethal injection executions and the *ethics* of lethal injection executions used for capital punishment when licensed physicians participate. The standard way of drug administration is intravenous. The drugs mostly used are barbiturates to induce loss of consciousness, followed by muscle relaxants to paralyze the person, leading to hypoxia, and potassium chloride to stop the heart from beating. Theoretical death, defined as the cessation of heartbeat, should occur in 90 seconds but takes an average of 7 to 11 minutes. There is concern that the criminal experiences reawakening to feel the pain associated with potassium injection amongst the horror of paralysis. At least eight American chemical executions were highly botched, and in 2022, one took three hours to achieve death³. One infamous botched chemical execution was of Dennis McGuire in Ohio in 2014⁴. Due to the unavailability of some usual drugs, the execution was performed with midazolam and hydromorphone. McGuire had waited 19 years on death row. During his chemical execution, he gasped and snorted for 15 minutes, and his heart took 25 minutes to cease beating. His family then sued the State of Ohio for causing McGuire cruel and unusual punishment, violating the US Constitution.

In lethal injection execution, attaining venous access is very difficult due to the subject's stress-driven vasoconstriction, obliteration of peripheral veins from street drug injections, and incompetence of the persons inserting the venous cannulas. Many chemical executions have been botched. The subjects survive after much pain from the potassium injections or take over an hour to die due to the extravasation of all the execution drugs. The chemical killing of criminals has been practiced in the United States of America, China, Thailand, Guatemala, Taiwan, The Maldives, Nigeria, and Vietnam. Nazi Germany used chemical injections to exterminate prisoner children. The United States has chemically executed over 1283 prisoners, using mainly anesthesia drugs⁵.

Intentional medical killing or accelerated and assisted dying of suffering terminally ill persons is called euthanasia. Legal assisted suicide has also been done. Euthanasia and assisted suicide by physicians evoke much controversy concerning the ethics thereof. The legality of chemical execution and assisted death varies between nations.

Many medical societies do not permit physician members to participate in state chemical executions or assisted dying. A physician wishing to become a state executioner must usually cease treating regular patients. The physician must choose between professions, and there is no returning to their former patient treatment practices. Medical professional societies also often prohibit chemical execution from being associated with any

term like “medical” or being considered the practice of medicine. The term MEDICAL EXECUTION must be replaced with the term CHEMICAL EXECUTION.

The only argument for a chemical execution is that it is conceptually a humane way to execute criminals. In the world, to date, experiences have often been shambles and cruel debacles.

There is a main point in discussing chemical execution in a textbook on anesthesia drug errors. The point is that anesthesia medications are the most dangerous group of medications in medicine. Accordingly, anesthesia medications have a high potential to be very harmful and cause death when incorrectly administered. That inherent danger is the reason there is an interest in using anesthesia medications for the chemical execution of murderers.

3. INTENTIONAL (CRIMINAL) ANESTHESIA DRUG ERRORS.

It is exceedingly rare for any anesthesiologist to intentionally commit criminal medical murders, but it is fascinating to the news media and their readers when reported. There is a strong trend for medical murderers to kill many people before getting caught. It is very uncommon for intentional medical murder convictions to be based on irrefutable forensic evidence connecting to the deaths. The weight of circumstantial evidence has to be used to secure convictions. Many of the convicted medical murderers proclaim innocence to the end.

Sarmiento classified medical murders as being of two types⁶. The first is *Pseudo-Mercy Homicide*. The murderer believes they are providing mercy to the victims, and the murderer derives fulfillment and joy from each killing. Infamous Dr. Harald Frederick Shipman killed victims using morphine injections and likely killed over 250 persons. He was finally caught when one 81-year-old victim left her estate to him in her will, and the family became suspicious that the victim had not died naturally.

The second type of medical homicide is *Pseudo Hero Homicide*. The murderer creates scenarios in hospital settings where they can act as heroes in attempting to resuscitate and save the suddenly dying patient. Nurse Genevieve Jones was caught after she injected succinylcholine into a 15-month-old child, who was observed having seizures and paralysis within minutes of the nurse having been at the patient’s bedside. A physician was suspicious of the nurse, especially as an ampule of succinylcholine had gone missing. When the ampule was found, it had 2 puncture points in the rubber stopper, which is unusual for a single-use drug. Further investigation showed a remarkable number of deaths had occurred in children over a short period at the hospital with nearly perfect correlation with the shift times that Nurse Jones had worked. Her sentence was a 99-year jail sentence. She is believed to have killed 60 children.

In 2022, Fiona Guy reviewed medical serial killers⁷. Nurses form 84% of serial medical killers. Half have recognizable mental health issues and personality disorders. They nearly exclusively commit their crimes with high-risk injectable drugs, like anesthesia drugs. They derive pleasure from killing, and it becomes addictive. Other characteristics are that they often hop jobs between hospitals or nursing homes, are attention-seeking, behave strangely when patients die, and might have disciplinary records. Sometimes, they predict patients’

deaths, prefer night shifts, have substance abuse habits, and have personal relationship issues. Their killings initially escape discovery until a spike in fatalities is observed in a ward, with all deaths correlated with the suspect nurses' work schedule. Convictions are very challenging, as seen in the case of British Nurse Colin Norris.

British Doctor Harold Shipman killed 218 victims by injecting overdoses of morphine. Japanese midwife Miyuki Ishikawa killed 103 babies. German Nurse Niels Hogel killed 85 victims with injectable heart drugs. Iraqi Doctor L.O.M. al-Tae killed 43 wounded soldiers by injecting anticoagulants. American hospital orderly Donald Harvey killed 31 victims using morphine and insulin. American Nurse Jane Toppan killed 31 infirm people. American Nurse Charles Cullen was convicted of killing 29 patients but suspected of killing 400. Bavarian Nurse Stephan Letter used injection muscle relaxants to kill 29 victims. Swedish nurse Anders Hansson killed 27 elderly patients by forcing them to drink detergents. French Doctor Marcel Petiot killed 26 persons by injecting them with cyanide. In all convictions of medical serial killers, the likely true number of victims is always much more than the number of victims identified before the court.

In 2022, American anesthesiologist Reynaldo Riviera Ortiz was arrested and charged with murder, based on strong circumstantial evidence, for murder⁸. An anesthesia colleague of his had collected a saline infusion bag in the hospital, where they worked to self-infuse herself for dehydration and died from drug-induced cardiac arrest due to bupivacaine contamination of the infusion bag. In a short period, 11 other hospital patients at the same institution had very unexpected critical cardiac events associated with the initiation of intravenous electrolyte solutions. The events were similar and completely out of pattern for the hospital. It was soon discovered that infusion bags in the storage space had evidence of needle punctures and drug contamination. Additionally, Dr Ortiz was seen on security cameras placing infusion bags into the storage cabinet shortly before each mal-event occurred. The allegations proposed he was doing this in retaliation for multiple unrelated misconduct probes that he was facing in his employment.

It has been written that there are 2 main types of intentional medical murders generally. The first is the PSEUDO-MERCY HOMICIDE, where the killer believes they are alleviating patient suffering by killing them by secret administration of a lethal medication. The second kind of killing is PSEUDO-HERO HOMICIDE, where the killer nurse or physician secretly administers a lethal medication to a patient to create a medical emergency, usually fatal, where the killer can act as a hero trying to save their life, occasionally successfully.

There is an associated third category of medical murderer, where an individual deceitfully pretends to have critical medical skills they do not have. Commonly, it happens in third-world countries where they emigrate pretending to be competent surgeons, bypassing rigid verification of having appropriate skills. They desire to be successful, but eventually, it becomes recognized that they have an observable high mortality rate among their surgical patients. Although they never intend to kill any patient, they uncaringly feel no concern about possibly killing a patient when they knowingly perform critical major surgeries for which they have inadequate skills. Then, a resulting patient death is inarguably murder.

The case of Dr. Christopher Duntsch, who moved from a hospital in Texas, USA, leaving a trail of critically injured patients, fits the definition of a Medical murderer⁹. He was legally a surgeon, but in truth, he had very substandard training, incompetent skills, and a

drug addiction. He operated on neurosurgical patients, fully knowing of his personal incompetence, and his medical care displayed consistent patient management, lacking integrity, competence, and concern. Witnesses described his care as unprecedented egregious negligence, even though no one proposed he intentionally desired injury to his patients. He did not care that his incompetence injured patients¹⁰. He was finally jailed for life for maiming and killing patients.

4. OTHER PUBLISHED CASES OF INTENTIONAL MEDICAL DRUG MALADMINISTRATIONS.

Single-event or small number series of intentional erroneous drug administrations designed to cause patient harm must occur annually, even if rarely. The ill intent of the sabotaging nurse can be towards either the *patient* to cause damage, or it could be towards the *anesthesiologist* for him to take the blame for the patient's bad outcome. It is, however, very hard to identify such surreptitious crimes, and few single events or small number series are described as detailed cases in scientific journals. All professional scientific writers on the subject, however, refer to such events without references. That suggests they have informally heard credible stories.

Some illustrative cases are;

- A German nurse, Niels Hoegel, was sentenced to life in jail for 85 murders. He admitted to intentionally using drugs used by anesthesiologists to induce cardiac arrest in patients, to give himself the thrill of then trying to resuscitate the patients. Some survived.
- A United States nurse was convicted of killing four men with air injections following their cardiac surgery and was sentenced to death in 2021^{11, 12}.
- Seven women sued Yale University when a nurse allegedly substituted saline for the fentanyl injections the women were supposed to receive for analgesia during fertility therapy, causing the patients undue pain¹³. The nurse confessed to her crime, having diverted the drugs for personal use, and apologized.
- A Kentucky nurse was charged with murder after she administered lorazepam, without a doctor's prescription, to a 97-year-old patient causing his death¹⁴.
- One nurse anesthetist facing criminal charges had allegedly documented administering sedatives and opiates to patients under his care but diverted the drugs to his personal use to the detriment of the patients¹⁵.
- In 2021, a Missouri respiratory therapist was charged with murder 20 years after 18 patients under her care had cardiorespiratory arrests, with 9 dying.¹⁶ Historically, at that medical care center, only one patient death occurred annually, and then 18 sudden cardiorespiratory arrests with 9 deaths in a single period of a few months drew attention. Those patient medical complications all happened during the brief period of the respiratory therapist's employment. One patient was found to have inexplicable muscle relaxants and opiates in their blood. It took 20 years for a prosecuting attorney to address the matter of those deaths, and only after being encouraged to do so by the family of one patient who never accepted their family member's death as being

natural. Proving guilt will be challenging and very dependent on circumstantial evidence.

- Dr. William Palmer killed many people with strychnine, for which he was finally found guilty and hung from the gallows in London in front of 30,000 citizen spectators in 1856 (Wikipedia).
- Dr. RR Ortiz, an anesthesiologist in Texas, USA, was arrested on 2022-9-14 for the deaths or near deaths of about 15 patients. Earlier in the year, he faced a medical licensing board's initial inquiry about a patient with severe complications during and after a minor elective procedure and anesthesia¹⁷. Ortiz was very upset about the investigation and feared it would potentially cause him to lose his medical license, which would be economically and personally devastating.

Witnesses, security videos, initial forensic evidence, and circumstantial evidence strongly suggest that he started his criminal actions after the medical license inquiry. He placed intravenous infusion bags heavily injected with lidocaine, bupivacaine, and epinephrine (adrenaline) into a storage space where other nurses and anesthesiologists would retrieve infusion bags for their patients. That set off a series of cardiac arrests in the hospital that was unprecedented in patients who were unknowingly all administered the *doctored* infusion bags. The first unusual cardiac arrest in someone else's anesthesia patient in the same hospital happened 2 days after Ortiz had had his first medical inquiry meeting. The full investigation only started once the pattern of multiple unusual cardiac arrests was recognized within the hospital, and Ortiz was identified as the specific prime suspected perpetrator.

- Dr. Bradley Hay underwent anesthesia and surgery and experienced awareness, creating subsequent dramatic emotional distress and nightmares for him¹⁸. It was proposed in legal documents that his anesthesiologist had diverted the fentanyl drugs needed for the anesthetic to serve his long-standing known documented fentanyl addiction and made *false recordings of fentanyl administration* during the anesthetic. The false recordings concealed the diverted fentanyl.
- Nurse Lucy Letby was jailed for life in 2023 for killing many hospitalized babies by intentional injection of air¹⁹. Interestingly, the hospital management initially tried to suppress police investigation of the nurse, fearing damage to the hospital's reputation, after doctors expressed their suspicions and concerns about the many baby deaths²⁰.
- Missouri respiratory therapist Jennifer Hall was jailed for 18 years for killing 2 patients by injecting them with the paralyzing drug succinylcholine in 2023²¹. She was found with that drug in her possession, although she had no license to administer the drug. Circumstantial evidence linked her to 18 other related incidents ending in 9 other deaths.

5. THE FRENCH DOCTOR CHARGED WITH INTENTIONAL POISONING OF PATIENTS.

Dr. Frederic Pechier, a French Anesthesiologist, was indicted for "poisoning vulnerable persons" "with premedication. Allegedly, 24 routine small-surgery patients had cardiac arrests on the operating room table, and nine died. After an initial interview with a judge, he

was released under judicial supervision and suspended from practicing medicine. In an investigation into an accumulating series of anesthesia patients who experienced severe adverse events, foremost cardiac arrest, the doctor was identified as the only link between all the cases. He was the planning manager supervising 10 other anesthesiologists. It was found that infusion bags stored for anesthesiology use had been contaminated by adding potassium and local anesthetics.

Dr. Pechier denied all charges. There was no absolute proof he was responsible in any way for these events, but he was only suspected via circumstantial corroborating evidence. It has been postulated that he did this with the expectation of later being called to assist with the resuscitation of the patients after they collapsed. He was mostly successful, and he derived thrills from this and his early growing reputation as being excellent at resuscitation. It is also alleged that conflict with his peers may have also motivated him. He survived a suicide attempt in 2021 and was hospitalized for several weeks.

In 2023, Dr. Pechier was suspected of involvement in an additional suspicious 8 cases of alleged intentional poisonings, four of whom died. His suspension was adjusted to allow him to work as a physician but excluded from anesthesia care of patients. He has been facing these charges since 2017.

He has at all times claimed complete innocence. There is no concrete proof. Formal prosecution in court does not yet have a set date. Investigations continue into the sixth year. It is a possibility that he is innocent, and another party is guilty of sabotaging the patients' infusion fluids, and that the now 32 patients involved were subjects of intentional drug maladministration, "drug errors" in the context of this book's subject.

6. THREE PERSONAL EXPERIENCES OF OBSERVING SECONDARY-OBJECTIVE INTENTIONAL MEDICATION ERRORS (SABOTAGED DRUG ADMINISTRATIONS)

These are 3 previously undescribed cases of intentional medication maladministration. In one scenario, the perpetrator created a premeditated, self-serving and deliberate error designed to be undiscoverable in the medication records process but observable in the patient. In the other 2 scenarios the medication records also had concealed drug mal-administrations, and the significant patient harm from the sabotage acts was designed to be discovered with subsequent blame and professional reputational damage falling upon a 3rd person, this book's author. The first was a devious plot to *divert opiates* under the patient's name to serve the needs of the *perpetrator's opiate addiction*. The second 2 scenarios were done to cause some harm to the patient but with the primary objective of having this book author be held responsible for what happened to the patient. This book author observed and experienced these three crimes on patients under his care.

CASE NUMBER 1. A trainee anesthesiologist was managing an awake upper limb surgery patient under a peripheral nerve block anesthetic with minimal sedation. The nerve block had been performed with a flawless technique. Testing showed rapidly developed complete loss of upper limb sensation and full arm paresis. As the attending anesthesiologist, this author was fully confident about leaving the trainee alone with the patient for the aseptic surgical field preparation and initiation of surgery.

Upon returning to that operating room to relieve the trainee for a lunch break an hour and a half later, the attending anesthesiologist discovered that the patient was under general anesthesia. The trainee had induced general anesthesia in the attending's absence, claiming the nerve block had failed to work sufficiently for the surgery. He stated that the patient felt pain with the first surgical incisions and needed to be put to sleep. It was against a general training protocol that he had done this without calling and notifying the attending immediately. In addition, the patient's paper anesthesia record showed systolic blood pressure spikes to 200mg Hg every 10 to 15 minutes despite being under general anesthesia, which the trainee had treated with a dose of 100µg fentanyl each time and recorded the drug as administered on the paper record. The attending anesthesia faculty took over care of the patient and sent the trainee out to lunch. During the lunch break, in the trainee's absence, the patient maintained perfect blood pressure without requiring cardiovascular medications. The trainee took unusually long on his lunch break and only returned an hour later. As an excuse for his extended lunch break, he claimed his training program supervisor had detained him.

The anesthesia chart, for that hour under this faculty's time caring for the patient, showed a tram-line-like straight track of near identical perfect blood pressure recordings, which starkly contrasted to the spiky up and down blood pressure graph on the anesthesia record of the preceding period. In addition, only a modest amount of volatile anesthesia was needed. Those latter observed events suggested the nerve blocks were working perfectly. The record was written on paper record with 10-minute interval vital sign recordings. The attending anesthesiologist was intrigued and examined the anesthesia-machine digital record of the measured blood pressures. It showed earlier blood pressure spikes that matched those on the paper record. After returning from lunch, the trainee took over the case for the last hour of surgery. Upon the completion of the surgery, but before the patient was transferred away from the operating room, the attending anesthesiologist returned to the operating room and observed that when the patient was again under the trainee's care for the last anesthesia period, the high blood pressure peaks had returned. The trainee had again claimed and noted to have treated it with multiple 100 µg doses of fentanyl. Despite receiving a vast amount of fentanyl as recorded on the paper anesthesia record and intermittent serial blood pressure recordings of 200 mg Hg, the patient woke up immediately after surgery, had a fully functional nerve block, and was 100% pain-free. The patient was alert with no evidence of fentanyl sedation.

As the supervising faculty member of this trainee for that day, this author was very puzzled about the events and saved copies of the anesthetic records for later review and contemplation, as was his lifetime habit with an unusual case.

Two weeks later, the operating room pharmacist notified the anesthesia trainee's program supervisor that his weekly total amounts of anesthesia patient fentanyl withdrawn from the pharmacy was *vastly more* than the amounts drawn by any other anesthesia trainee in the university hospital over the preceding 6 weeks. The trainee, upon confrontation by the head of the department, admitted to being fentanyl addicted, and his stash of illicit fentanyl ampules in his private locker was discovered. He was fired, and under threat of criminal conviction, he accepted being committed to a rehabilitative treatment program in a state-run drug addiction treatment facility. This

was all done confidentially, and the trainee's absence from the training program was only discovered by this author 2 months later.

Then, for the first time, this author fully understood what had been happening with the unusual patient anesthesia course just described. The trainee had inappropriately induced general anesthesia despite the patient having a perfect nerve block sufficient for awake surgery to cover his next steps. He then **injected the patient with IV phenylephrine** every 15 minutes **to cause high blood pressure spikes**. He **concealed having injected phenylephrine** by not entering those drug administrations into the anesthesia record. He then **pretended to have administered the patient fentanyl to improve the blood pressure spikes and falsely recorded fentanyl administration in the anesthetic record**. He diverted the ampules to his private usage, serving his addiction later in the day. His extended one-hour lunch break was spent recovering from a self-injected dose of fentanyl.

The patient did well despite this chemical assault. After completing his drug rehabilitation, the trainee moved to another state and got a temporary conditional medical license, limiting him to management jobs without direct patient care.

There is a good hindsight argument that the fentanyl-addicted trainee *should have* faced additional **criminal assault charges or attempted homicide charges** for inappropriately administering general anesthesia to his patient and inappropriately chemically inducing hypertensive episodes. In a sufficiently vulnerable patient, such uncalled-for injections of a potent vasoconstrictor causing severe hypertension could have triggered a cerebral stroke, myocardial infarction, and death.

A key learning point is that one should always consider a medication administration error or sabotage that has occurred when **any patient's vital signs, patient drug responses, or patient outcomes seem bizarre and inexplicable**. The drug error could be an initially unrecognized unintentional mistake. In this rare case, it was a concealed intentional drug maladministration, a homicidal sabotage act against an innocent patient by a 3rd person.

In the present era of growing addiction to fentanyl, many medical staff with access to fentanyl divert patient medication fentanyl to themselves, feeding their addiction. That injures the patient who, unbeknownst to the other workers, fails to receive fentanyl. One nurse assistant replaced the fentanyl in ampules with saline to conceal her fentanyl theft. That caused a lot of patients sedated by the attending anesthesiologist, who did not know he was injecting only saline, to experience severe pain during gynecological fertility procedures²².

In Iowa, USA, in 2023, a nurse anesthetist had his license suspended for the exact same behavior, and he went to drug rehabilitation therapy²³. His problem was first suspected when it was observed his patients were unusually swiftly awake and suffering from severe post-surgical pain upon awakening from anesthesia despite a large amount of opiates recorded as administered during the anesthetic. That pattern was starkly different from that of other anesthesia providers' patients in the institution or previously. This diversion of anesthesia opiates is a not infrequent event in modern times with growing fentanyl addictions among anesthesia providers.

Diversion of opiates from patient care, which is theft of controlled substances, is an important problem, even if the diversion is unassociated with harmfully altered direct patient care. The anesthesiologist (or other healthcare worker) will be directing the opiates to addictive self-use, or sale or distribution to others. The criminal and addicted anesthesiologist is unfit to continue providing health care to patients. This healthcare worker diversion of opiates is believed, in the USA foremost, but in the world too, to be underestimated and underreported. It is called a “National Epidemic” in the USA²⁴.

Anesthesia opiate diversion can be fully undetectable unless pharmacists actively search all medical records and dispensing data. The objective is to identify a healthcare worker prescribing opiates or collecting opiates from the pharmacy *out of pattern* from their peers or earlier practices. That is very laborious. With the integration and computerization of medical order entry, automated dispensing cabinets (ADC), medical records and anesthesia records software have been developed to automatically perform opiate movement audits. It was possible to swiftly identify healthcare workers of interest, and investigations were closed after 7 days, compared to 49 days in the era preceding the use of opiate diversion detection software.²⁵

CASE NUMBER 2. This author had started a personal solo general anesthetic for a generally healthy patient undergoing a partial colectomy. It was in a private practice hospital. A qualified registered nurse (RN) assisted with the anesthetic. She acted as an anesthesia technician and a general assistant to the anesthesiologist. Her title was “Anesthetic Nurse.” Her specific anesthetic nurse training was simple on-the-job casual training with no need for studying or writing exams after qualifying as an RN. Her duties involved (i) fetching anesthesia drugs and devices from the pharmacy or a store-room when their need for use arose during the day, (ii) holding the oxygen mask while the anesthesiologist injected induction drugs, (iii) if the anesthesiologist’s hands were busy during a sterile procedure inserting catheters or devices into the patient the anesthesia nurse would make anesthetic gas and vapor adjustments or administer drugs under the instruction of the anesthesiologist, (iv) cleaning and resetting the anesthesia machine and replacing disposable airway components in between surgeries, (v) assisting with and setting up the sterile trays and kits for insertion of arterial lines, central vascular lines, and nerve blocks, and (vi) many other smaller tasks. Anesthetic nurses were well respected and considered invaluable operating room team members.

The patient in this case report, at induction of general anesthesia was paralyzed, intubated, ventilated, and placed on an inspired air-oxygen gas mixture with volatile anesthesia maintenance.

With the induction of general anesthesia, this author expected the patient’s blood pressure to fall 10% to 15% from the pre-anesthetic value. After the induction of anesthesia, it did not fall and climbed to 5% over the pre-induction pressures. Adjustments were made to the volatile anesthetic vaporizer to deepen the anesthetic. A quick check confirmed that the vaporizer was full and other vital signs were correct. The vaporizer had been refilled before the anesthetic and was still full. The high blood pressure persisted and failed to trend downwards. At that time, in-line vapor

concentration measurement technology did not exist. An extra dose of fentanyl was administered. The situation was unchanged, and the anesthesiologist became increasingly curious about this unusual failure for the blood pressure to trend downward from the preoperative blood pressure levels. It was, however, not high enough to need specific extra vasodilator drug treatment. The patient's pupils were small, and the lower eyelids were filled with tears. The muscle paralytic agent was shown to be fully effective by peripheral nerve stimulation testing.

Everything possible was repeatedly checked. Then, after an hour, the problem was recognized for the first time. The anesthesia machine had 2 mounted vaporizers, with a selector switch between them to place one into the fresh gas flow line. *The vaporizer selector switch was set towards the vaporizer that was not being used.* Within a minute of that vaporizer selector switch correction, the patient's blood pressure fell to 15% below the pre-anesthetic measured blood pressure measurement values. After that, the anesthetic and surgery were uneventful, and all concluded successfully. The pupils remained pinpoint size and the lower eyelid space tears became observably less. It was correctly feared that the patient may have experienced awareness, and midazolam was administered to create some retrograde amnesia in the patient.

At the postoperative visit, the patient reported experiencing awareness and vivid recall of all conversations and dialogues in the operating room in that first hour of anesthesia. She had never felt intolerable pain, although she had tactile awareness of the surgery. She had received 100µg of fentanyl with her induction medications and a second supplementary dose. She had felt frustrated by her inability to move, talk, or see during her awareness experience. Her eyelids were taped closed during the anesthetic, and she had been muscle-paralyzed.

The anesthesiologist was surprised, as he had never before had such a mishap in his career. He was convinced he had set the vaporizer selector switch correctly during his pre-anesthetic preparations for the case. He could only blame himself and self-questioned his own mental functioning with concern. He obsessively checked the vaporizer selector switch for the rest of the day, and all the following surgery patients had successful uneventful anesthetics. A week later, he returned to work at that same hospital again and had the same anesthesia nurse assigned to work with him. An identical experience repeated, with the day's first patient receiving no volatile anesthetic for an hour and experiencing subsequent awareness under anesthesia. Once again, it took this anesthesiologist nearly an hour to discover that the vaporizer switch was incorrectly set. The anesthesiologist became depressed over the week and questioned his sanity. He pointedly set the vaporizer switch to the planned vaporizer to be used before the case while still remembering the previous week's experience. He felt very embarrassed that, for a second time, it had taken him so long to discover the anesthetic error after the induction of anesthesia. He also felt concerned about his own health as he was in his early fifties. He had not drunk alcohol the preceding evenings, had slept well, and had not made other mistakes or distraction errors in any other aspects of his life that month.

Again, a week later, he returned to the same private hospital and was assigned to have the same anesthetic nurse be his assistant for the day. He had not discussed the two anesthesia mishaps with anyone and kept them secret. The whole week, he

obsessively checked the vaporizer selection switches in the other hospitals he worked at, which had matching brands and models of anesthesia machines. His new routine for that week was other than setting the switch to his preference at the start of each case. He also checked the selector switch each time he made a vaporizer concentration setting adjustment during the anesthetic.

On this third occasion, he was obsessively very alert to not making a similar “mistake.” In his mind, he had not associated the error specifically with that one hospital, and he feared he could make it again working anywhere. After successful induction of general anesthesia with intubation, he set the inflowing anesthesia gasses vapor concentration and confirmed that the selector switch between the two vaporizers was correctly set. He then turned his back to the anesthesia machine and patient and did paper administrative tasks on the work surface of the anesthesia supplies cart. The regular nurse assisted with the anesthetic, acting like an anesthesia technician, and completed cleaning and tidying up chores.

Ten minutes later, this anesthesiologist glanced back at the anesthesia machine’s vital signs monitor and observed that the patient’s blood pressure was higher than expected at the immediate pre-induction level. He leaned in to set the vaporizer concentration higher and **saw the vaporizer selector switch was turned AWAY from the vaporizer that was dialed up**. He understood some person in the operating room had **surreptitiously flipped the vaporizer selector switch** across while his back was turned after he had started the anesthetic with the switch correctly set. He quietly corrected the selector switch, administered midazolam, and then looked studiously at all the persons in the operating room. No one was close to the anesthesia machine, and everyone was preoccupied with their specific responsibilities. No one was watching him. The anesthesia nurse assistant was out of the operating room for her morning tea break at that moment. He remained attentive to the switch and slyly studied his anesthetic nurse all day. All the surgeries and anesthetics of the day concluded successfully and uneventfully. The first patient, despite receiving no volatile anesthetic for about 10 minutes, could not report any awareness experience afterward, perhaps due to the benefit of receiving midazolam at the time and only having had a short period of volatile anesthetic vapor deprivation. **It had been an anesthesia drug sabotage act.**

For the first time, this anesthesiologist now considered that a second person had been interfering with his anesthesia care and deviously switched the vaporizer selector to the wrong side shortly after the anesthetic had started. It could only be the anesthesia nurse assistant. She was the only one who worked close enough to the anesthesia machine to change the vapor selection switch position. Perchance, he had worked with the same anesthesia nurse with each vaporizer error case. She was relatively new and had a slightly irritable nature. She lacked charm and never smiled or sounded happy. She was less respectful of the anesthesiologist than what would have been the norm. She was a mixed-race person with fine European narrow nose features and long, straight black hair but had pitch-black skin. The country in which this case occurred was, at that time, a country that had laws forcing persons of different races to live in separate race-specific residential areas. Within the hospital, any person’s race was irrelevant among the doctors and nurses, and 60% of the nurses were non-white, although 100% of the physicians were white-skinned. Everyone, however, would have

said general working conditions were notably cordial, respectful, pleasant, and fully race-blind.

The anesthesiologist felt he was always very polite and respectful and had never knowingly inadvertently said or done anything offensive to this anesthetic nurse. He still strongly suspected this anesthesia nurse assistant was the culprit who had sabotaged his anesthesia care. However, he could not determine whether he was the sole target of that anesthesia nurse's sabotage actions or many others. He had not spoken to others to hear if they had had similar experiences. It would be tough to prove his suspicions. He decided to initially only make a simple plan and firmly requested the hospital's nursing management never assign that nurse to ever work with him again. He did not supply a reason for his request. He then discovered the nurse was working out her resignation month. She shortly emigrated to the Netherlands, where she trained to become a European Nurse Anesthetist when she would administer anesthesia to patients. The anesthesiologist firmly believes that the anesthesia nurse had personal emotional problems with an inner misdirected anger towards white-skin physician anesthesiologists, specifically himself.

The company that manufactures the brand and model of anesthesia machine with this selector switch soon stopped making that model. Its design was a risk factor for erroneous vaporizer selection, causing patient awareness under anesthesia experiences. The company also retrospectively modified all the older anesthesia machines, making it impossible to rotate the vaporizer dial to an "on" position if the vaporizer selector switch was not turned towards that vaporizer, thus selecting it. Also, the vaporizer dial was locked off if the vaporizer selector switch was not switched toward that vaporizer. That was a double safety feature design. The exact sabotage events that happened to this author's three patients could never happen again.

CASE NUMBER 3. This author was working with a resident anesthesia trainee on a Monday morning. The patient was scheduled to receive a single-shot proximal sciatic nerve block with a single-shot femoral nerve block combined with general anesthesia. The nerve blocks were performed before general anesthesia. The local anesthetic drug was injected after both ultrasound imaging and nerve stimulation verification of needle tip placement was obtained. General anesthesia was immediately induced thereafter. It was a planned combined regional and general anesthetic. After the surgery concluded and upon the patient's awakening, it was observed that the patient had severe pain and *zero evidence* of any degree of nerve block or local anesthesia-associated analgesia. Despite the double nerve block, all motor and sensory functions were 100% normal, and post-surgical pain was substantial.

It is a fact that occasional slow-onset or partial nerve blocks can occur, and they always correlate with some identified aberrant technical aspect or mistake relating to how the nerve block was performed or a mismatch between the dermatomes nerve blocked and the tissues surgically incised. Typically, those partially failed nerve blocks have some evidence of sensory or motor function loss, which is not enough to cover all the surgical dermatomes needed for awake surgery but good enough to provide noteworthy analgesia after the subsequent surgery under general anesthesia. A 100% failure

of a pair of nerve blocks was a “never-before” event for the very experienced anesthesiologist-teacher. There was very close oversight of the experienced trainee performing the nerve block, and the teacher was confident that the block techniques and their execution were immaculately correct. This was an inexplicable total nerve block failure. A Male registered nurse with much experience in assisting with regional anesthesia had prepared all the drugs for injection and generally helped with other little chores during the nerve block procedure.

The experience of an inexplicable total nerve block failure despite seemingly perfect verification of optimal nerve block needle tip placement using ultrasound and electro-stimulation occurred again on each of the two following Mondays. In none of these very unusual three cases was there any clinical hint of a sign that any local anesthetic drug had been injected. In all three cases, *rescue nerve blocks* were done by this author *after* the surgery with drugs prepared by himself. All the rescue blocks were easy to perform and provided potent analgesia within a few minutes after injection. All patients did very well after hospital discharge.

As the same male nurse had prepared the local anesthetic syringes for all three patients’ failed nerve blocks, it was retrospectively considered that the injection syringes had had no local anesthetic drug and were likely filled with 0.9% saline (NaCl). That male nurse was suspected of intentionally sabotaging the nerve blocks. The number of syringes the nurse had prepared was two per nerve block, forming a total of six. The content of the syringes was likely intentionally incorrect. It was a planned act to make the nerve blocks fail. The target of the enmity was unlikely the patients, each a different person. The sabotage target was unlikely the anesthesia trainee with each patient, as they were different trainees each week. No other teacher had experienced total failed nerve blocks within that period. That excluded a drug batch problem. The target of this intentional act of patient harm was undoubtedly this author, the single physician-anesthesiologist supervising all those nerve blocks. The sabotage male nurse’s objective was to damage the physician’s professional stature.

The next question was why the registered nurse would be so motivated to cause intentional patient harm with an intentional major drug-substitution error to serve a secondary objective of injuring the treating physician. The suspected answer slowly became apparent. The nurse was a man who had just gone through a divorce and was depressed. He became most depressed over weekends when his loneliness most affected him. He drank heavily only on weekends, making him slightly hungover on Monday mornings when he was most depressed and observed by all to be very grumpy. In addition, he felt angry about his work environment and displayed that feeling. At that time, there were stressful circumstances within the department for all its workers with unmanaged rivalries.

In addition, this anesthesiologist, who had experienced these described three total nerve block failures, was an unmarried man who was starting to socialize with one administrative lady secretary working in the department. The male anesthesiologist and the female secretary were divorced and each cautiously recovering from their emotional traumas. They went out together to dinner once every few weeks. The problem male nurse, unbeknownst to this physician at that early time, was also taking

the secretary out to evening dinner occasionally, and he was aware this physician was doing the same. *The male nurse likely saw the teacher-physician as a romantic rival.*

RESOLUTION OF THE PROBLEM: This physician, who had had three patients with total nerve block failures, informed all the assistant nurses that he would retain all syringes after his future nerve blocks to study the contents. He said he had the technology to test the remnant drops in each syringe for their chemical identities. He did not elaborate any more than that. He also said he knew precisely why the earlier three patient nerve blocks had failed, which everyone had heard about. He did not, however, reveal his explanation to anyone. Next, he approached the registered nurse, who he confidently suspected had substituted saline for the local anesthetic drug into the nerve block syringes of the failed nerve blocks. He expressed that he felt concerned for the man and saw that he was very quiet on Mondays and asked him if he was depressed. The nurse acted surprised to be asked that and admitted to it. The anesthesiologist was empathetic and invited him to an evening barbecue party he hosted a few days later for a group of people. This physician also recruited the saboteur male nurse to assist him during his weekend teaching regional anesthesia workshops and paid him a generous salary. The nurse became a very loyal supporter of the physician. The clinical problem of saline substitution for local anesthetic drugs during nerve blocks never occurred again. In addition, the anesthesiologist ceased taking the lady secretary to dinner but remained cordial and respectful to her at work. He met his future wife a few months later. The problem assistant nurse started to date the secretary more often and later married her.

This anesthesiologist (this book author) never again experienced such 100% total nerve block failures when any nurse prepared the nerve block drugs. Fifteen years later the saboteur nurse apologized for his past unprofessional actions.

7. **WHY WOULD ANYONE COMMIT SECONDARY-OBJECTIVE INTENTIONAL MEDICATION ERRORS ON A PATIENT? (SABOTAGED DRUG ADMINISTRATIONS)**

(This book's full chapter has 19 pages and 33 references.)