

Appendix A

U.S. Standard Certificate of Death

U.S. STANDARD CERTIFICATE OF DEATH

LOCAL FILE NO.				STATE FILE NO.			
1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last) John Leonard Palmer				2. SEX Male		3. SOCIAL SECURITY NUMBER 123-45-6789	
4a. AGE-Last Birthday (Years) 92		4b. UNDER 1 YEAR Months: Days:		4c. UNDER 1 DAY Hours: Minutes:		5. DATE OF BIRTH (Mo/Day/Yr) April 23, 1911	
6. BIRTHPLACE (City and State or Foreign Country) San Francisco, CA							
7a. RESIDENCE-STATE Maryland		7b. COUNTY Frederick		7c. CITY OR TOWN Thurmont			
7d. STREET AND NUMBER 245 Lone View Road				7e. APT. NO.		7f. ZIP CODE 20212-1234	
7g. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
8. EVER IN US ARMED FORCES? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		9. MARITAL STATUS AT TIME OF DEATH <input checked="" type="checkbox"/> Married <input type="checkbox"/> Married, but separated <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Never Married <input type="checkbox"/> Unknown		10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage) Sheila Marie Sonner			
11. FATHER'S NAME (First, Middle, Last) Stanley Leonard Palmer				12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last) Lorraine Ellen Russell			
13a. INFORMANT'S NAME Sheila Marie Palmer		13b. RELATIONSHIP TO DECEDENT Wife		13c. MAILING ADDRESS (Street and Number, City, State, Zip Code) 245 Lone View Road, Thurmont, MD 20212-1234			
14. PLACE OF DEATH (Check only one; see instructions) <input checked="" type="checkbox"/> IF DEATH OCCURRED IN A HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival <input type="checkbox"/> IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Decedent's home <input type="checkbox"/> Other (Specify):							
15. FACILITY NAME (If not institution, give street & number) Mountain Memorial Hospital				16. CITY OR TOWN, STATE, AND ZIP CODE Frederick		17. COUNTY OF DEATH Frederick	
18. METHOD OF DISPOSITION: <input checked="" type="checkbox"/> Burial <input type="checkbox"/> Cremation <input type="checkbox"/> Donation <input type="checkbox"/> Entombment <input type="checkbox"/> Removal from State <input type="checkbox"/> Other (Specify):				19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place) Wesley Memorial Cemetery			
20. LOCATION-CITY, TOWN, AND STATE Frederick				21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY Boone and Sons Funeral Home, 475 E. Main Street, Frederick, Maryland 20216-3456			
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT Robert J. Boone				23. LICENSE NUMBER (Of License) 2569114			
24. DATE PRONOUNCED DEAD (Mo/Day/Yr) June 20, 2003				25. TIME PRONOUNCED DEAD 0310			
26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable) Julia R. Kovar, M.D.				27. LICENSE NUMBER 624998075		28. DATE SIGNED (Mo/Day/Yr) June 20, 2003	
29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month) June 20, 2003				30. ACTUAL OR PRESUMED TIME OF DEATH 0300		31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
32. PART I. Enter the chain of events—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary. IMMEDIATE CAUSE (Final disease or condition resulting in death) a. <u>Pulmonary embolism</u> Due to (or as a consequence of): Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST b. <u>Congestive heart failure</u> Due to (or as a consequence of): c. <u>Acute myocardial infarction</u> Due to (or as a consequence of): d. <u>Chronic ischemic heart disease</u>							Approximate Interval: Onset to death Minutes: _____ 4 days _____ 7 days _____ 8 years _____
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. Diabetes mellitus, Hypertension				33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
35. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year		37. MANNER OF DEATH <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined			
38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)		39. TIME OF INJURY		40. PLACE OF INJURY (e.g., Decedent's home, construction site, restaurant, wooded area)		41. INJURY AT WORK? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
42. LOCATION OF INJURY: State: _____ City or Town: _____ Apartment No.: _____ Zip Code: _____							
43. DESCRIBE HOW INJURY OCCURRED				44. IF TRANSPORTATION FAULT, SPECIFY: <input type="checkbox"/> Driver <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify):			
45. CERTIFIER (Check only one) <input type="checkbox"/> Certifying physician: To the best of my knowledge, death occurred due to the cause(s) and manner stated. <input type="checkbox"/> Practicing & Certifying physician: To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated. <input type="checkbox"/> Medical Examiner/Coroner: On the basis of observation, medical investigation, or any other source, death occurred at the time, date, and place, and due to the cause(s) and manner stated. Signature of certifier: <u>Edward M. Stone, M.D.</u> 46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Form 10) Edward Matthew Stone, M.D., 23 Porter Drive, Frederick, Maryland 29885-6789							

For use by physician or institution

To Be Completed/Verified By:
FUNERAL DIRECTOR

To Be Completed By:
MEDICAL CERTIFIER

MEDICAL CERTIFIER INSTRUCTIONS for selected items on U.S. Standard Certificate of Death (See *Physicians' Handbook or Medical Examiners' and Coroners' Handbook on Death Registration and Fetal Death Reporting* for instructions on all items.)

ITEMS ON WHEN DEATH OCCURRED

Items 24–25 and 29–31 should always be completed. If the facility uses a separate pronouncer or other person to indicate that death has taken place with another person more familiar with the case completing the remainder of the medical portion of the death certificate, the pronouncer completes items 24–28. If a certifier completes items 24–25 as well as items 29–49, items 26–28 may be left blank.

ITEMS 24–25, 29–30 DATE AND TIME OF DEATH

Spell out the name of the month. If the exact date of death is unknown, enter the approximate date. If the date cannot be approximated, enter the date the body is found and identify as date found. Date pronounced and actual date may be the same. Enter the exact hour and minutes according to a 24-hour clock; estimates may be provided with "Approx." placed before the time.

ITEM 32—CAUSE OF DEATH (See attached examples)

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black ink** in completing the cause of death section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

- Only **one** cause should be entered on each line. Line (a) **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
- If the condition on Line (a) resulted from an underlying condition, put the underlying condition on Line (b) and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the lowest used line in Part I.
- For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.
- The terminal event (for example, cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for line (a), then you must always list its cause(s) on the line(s) below it (for example, cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
- If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (for example, renal failure **due to** Type I diabetes mellitus).
- When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. (For example, a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.)
- Always report the fatal injury (for example, stab wound of chest), the trauma (for example, transection of subclavian vein), and impairment of function (for example, air embolism).

PART II (Other significant conditions)

- Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**. See attached examples.
- If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS 33–34—AUTOPSY

- 33—Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
- 34—Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No." Leave item blank if no autopsy was performed.

ITEM 35-DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "Yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "No" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36-IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

This information is important in determining pregnancy-related mortality.

ITEM 37-MANNER OF DEATH

- Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
- Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
- Indicate "Could not be determined" **ONLY** when it is impossible to determine the manner of death.

ITEMS 38-44-ACCIDENT OR INJURY—to be filled out in all cases of deaths due to injury or poisoning.

- 38—Enter the exact month, day, and year of injury. Spell out the name of the month. **DO NOT** use a number for the month. (Remember, the date of injury may differ from the date of death.) Estimates may be provided with "Approx." placed before the date.
- 39—Enter the exact hour and minutes of injury or use your best estimate. Use a 24-hour clock.
- 40—Enter the general place (such as restaurant, vacant lot, or home) where the injury occurred. **DO NOT** enter firm or organization names. (For example, enter "factory," **not** "Standard Manufacturing, Inc.")
- 41—Complete if anything other than natural disease is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents. This includes all motor vehicle deaths. The item **must** be completed for decedents ages 14 years or over and may be completed for those less than 14 years of age if warranted. Enter "Yes" if the injury occurred at work. Otherwise enter "No." An injury may occur at work regardless of whether the injury occurred in the course of the decedent's "usual" occupation. Examples of injury at work and injury not at work follow:

Injury at work

Injury while working or in vocational training on job premises
Injury while on break or at lunch or in parking lot on job premises
Injury while working for pay or compensation, including at home
Injury while working as a volunteer law enforcement official etc.
Injury while traveling on business, including to/from business contacts

Injury not at work

Injury while engaged in personal recreational activity on job premises
Injury while a visitor (not on official work business) to job premises
Homemaker working at homemaking activities
Student in school
Working for self for no profit (mowing yard, repairing own roof, hobby)
Commuting to or from work

- 42—Enter the complete address where the injury occurred including ZIP Code.
- 43—Enter a brief but specific and clear description of how the injury occurred. Explain the circumstances or cause of the injury. Specify **type of gun** or **type of vehicle** (e.g., car, bulldozer, train, etc.) when relevant to circumstances. Indicate if more than one vehicle involved; specify type of vehicle decedent was in.
- 44—Specify role of decedent (e.g. driver, passenger). Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

Rationale: Motor vehicle accidents are a major cause of unintentional deaths; details will help determine effectiveness of current safety features and laws.

REFERENCES

For more information on how to complete the medical certification section of the death certificate, refer to tutorial at <http://www.TheNAME.org> and resources including instructions and handbooks available by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782 or at www.cdc.gov/nchs/about/major/dvs/handbk.htm.

Cause-of-death – Background, Examples, and Common Problems

Accurate cause of death information is important to the public health community in evaluating and improving the health of all citizens, and to the family, now and in the future, and to the person setting the decedent's estate.

The cause-of-death section consists of two parts. Part I is for reporting a chain of events leading directly to death, with the immediate cause of death (the final disease, injury, or complication directly causing death) on line a and the underlying cause of death (the disease or injury that initiated the chain of events that led directly and inevitably to death) on the lowest used line. Part II is for reporting all other significant disease conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in Part I. The cause-of-death information should be YOUR best medical OPINION. A condition can be listed as "probable" even if it has not been definitively diagnosed.

Example of properly completed medical certifications

CAUSE OF DEATH (See instructions and examples)		Approximate Interval: Onset to death
<p>32. PART I. Enter the chain of events—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Rupture of myocardium</u> Due to (or as a consequence of):</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p> <p>b. <u>Acute myocardial infarction</u> Due to (or as a consequence of):</p> <p>c. <u>Coronary artery thrombosis</u> Due to (or as a consequence of):</p> <p>d. <u>Atherosclerotic coronary artery disease</u></p>		<p>Minutes</p> <p>9 days</p> <p>5 years</p> <p>7 years</p>
PART II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in PART I		
Diabetes, Chronic obstructive pulmonary disease, smoking		
33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input type="checkbox"/> No		
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No		
35. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown	36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	37. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined

CAUSE OF DEATH (See instructions and examples)		Approximate Interval: Onset to death
<p>32. PART I. Enter the chain of events—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Aspiration pneumonia</u> Due to (or as a consequence of):</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p> <p>b. <u>Complications of coma</u> Due to (or as a consequence of):</p> <p>c. <u>Blunt force injuries</u> Due to (or as a consequence of):</p> <p>d. <u>Motor vehicle accident</u></p>		<p>2 Days</p> <p>7 weeks</p> <p>7 weeks</p> <p>7 weeks</p>
PART II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in PART I		
33. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown		36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year
		37. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined
38. DATE OF INJURY (Mo/Da/YY) (Spell Month) August 15, 2003	39. TIME OF INJURY Approx. 2300	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area) road side near state highway
41. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No		
42. LOCATION OF INJURY: State: Missouri City or Town: near Alexandria		
43. DESCRIBE HOW INJURY OCCURRED: Decedent driver of van, ran off road into tree		44. IF TRANSPORTATION INJURY, SPECIFY: <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify)

Common problems in death certification

The elderly decedent should have a clear and distinct etiologic sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The infant decedent should have a clear and distinct etiologic sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant cause on the infant's death certificate (e.g., Hyaline membrane disease due to prematurity, 28 weeks due to placental abruption due to blunt trauma to mother's abdomen).

When SIDS is suspected, a complete investigation should be conducted, typically by a medical examiner or coroner. If the infant is under 1 year of age, no cause of death is determined after some investigation, clinical history is reviewed, and a complete autopsy is performed, then the death can be reported as Sudden Infant Death Syndrome.

When processes such as the following are reported, additional information about the etiology should be reported:

Abcesses	Carcinomatosis	Disseminated intra vascular coagulopathy	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Cardiac arrest	Dysrhythmia	Hypotension	Pulmonary edema
Adhesions	Cardiac dysrhythmia	End-stage liver disease	Immuno-suppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiomyopathy	End-stage renal disease	Increased intracranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiopulmonary arrest	Epileptic hematomas	Intra cranial hemorrhage	Renal failure
Altered mental status	Cellulitis	Embolization	Maldigestion	Respiratory arrest
Anemia	Cerebral edema	Failure to thrive	Malnutrition	Sepsis
Anoxia	Cerebrovascular accident	Fracture	Multi-organ failure	Septic shock
Arterio-encephalopathy	Cerebellar tonsillar herniation	Gangrene	Multi-system organ failure	Shock
Arthritis	Chronic bacilloidosis	Gastrintestinal hemorrhage	Myocardial infarction	Starvation
Asthenia	Cirrhosis	Heart failure	Old age	Subdural hematoma
Aspiration	Coagulopathy	Hemorrhoids	Open (or closed) head injury	Subarachnoid hemorrhage
Asplia	Compression fracture	Hepatic failure	Paralysis	Sudden death
Bacteremia	Conjunctivitis	Hepatitis	Pancreatitis	Thrombocytopenia
Bedridden	Conduction	Hepatosplenic syndrome	Perforated peptic ulcer	Uteral herniation
Biliary obstruction	Decubiti	Hypertension	Peritonitis	Urinary tract infection
Bowel obstruction	Dehydration	Hypothermia	Resuscitation	Ventricular fibrillation
Brain injury	Dementia (when not otherwise specified)	Hypovolemic shock	Pneumonia	Ventricular tachycardia
Brain stem herniation	Diarrhea			Volume depletion
Carcinogenesis				

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Episternal hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bleed	Emphysema	Hypothermia	Severe disorder	Surgery
Choking	Fall	Hypotension	Sepsis	Thermal burn/chemical burn
Drug or alcohol overdosing or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	