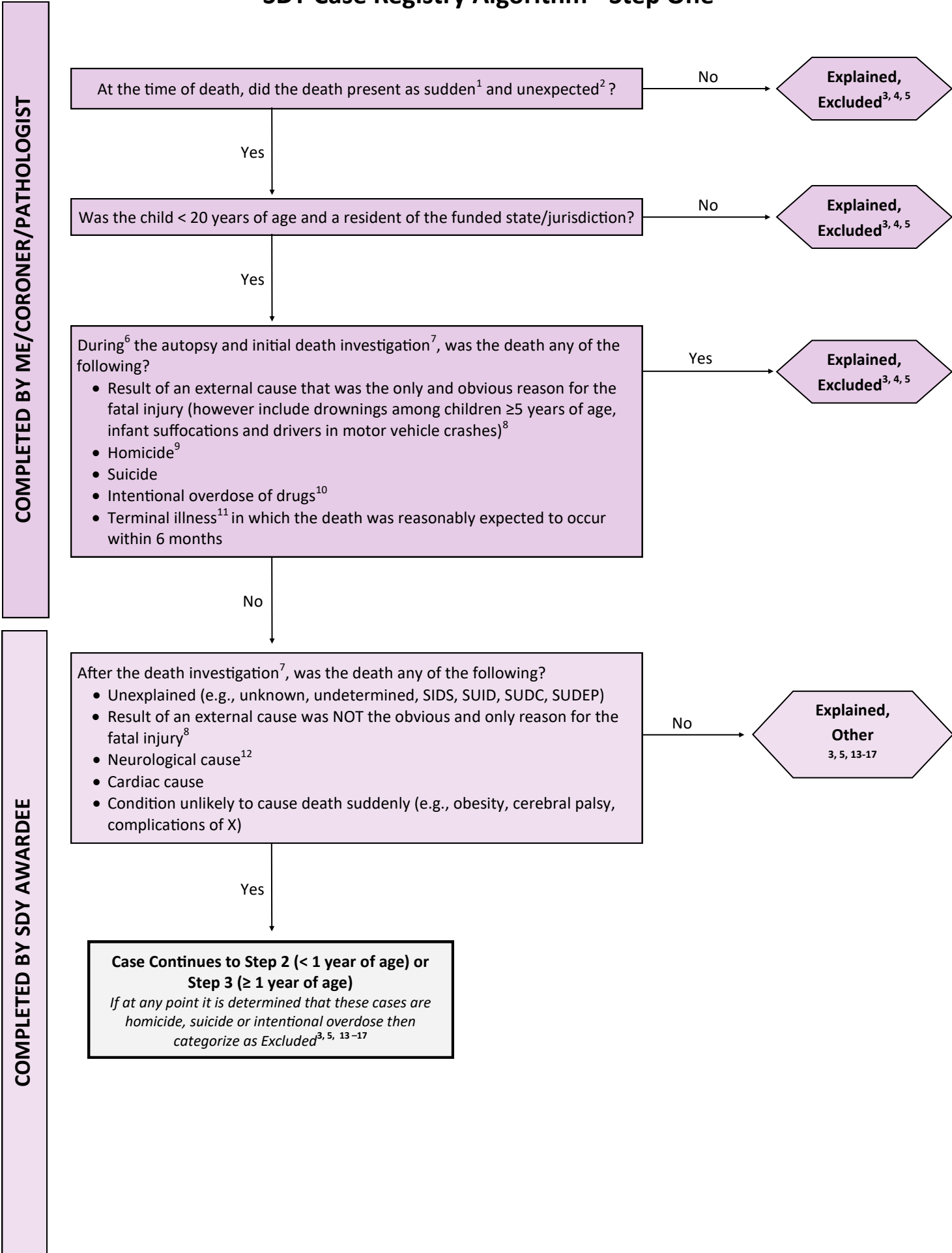


# SDY Case Registry Algorithm - Step One



COMPLETED BY ME/CORONER/PATHOLOGIST

COMPLETED BY SDY AWARDEE

# SDY Case Registry Algorithm - Step Two

Cases from Step 1 (< 1 year of age)

**Does the infant death meet the criteria for SUID Case Registry categorization?** Cases are those where the death certificate indicates the cause as unknown, undetermined, SIDS, SUID, unintentional sleep-related asphyxia /suffocation/strangulation, unspecified suffocation, cardiac or respiratory arrest without other well-defined causes, or unspecified causes (e.g. pneumonia) with potentially contributing unsafe sleep factors.

No → Explained, Excluded

**Was an autopsy<sup>18</sup> and death investigation<sup>7</sup> done?**

No/Unknown → Unexplained, No Autopsy or Death Investigation<sup>14</sup>

Yes → SDY Category: Incomplete Case Information (3, 5, 13, 14, 17)

**Were all of the following completed during autopsy: toxicology, any imaging, and pathology (including histology, microbiology or other pathology)?**

No/Unknown → Unexplained, Incomplete Case Information

Yes →

**Is there detailed information about the location (e.g. adult bed, couch, etc.) AND position (e.g. prone, supine, side) in which the infant was found?<sup>19, 20</sup>**

No/Unknown → Unexplained, Incomplete Case Information

Yes →

**Was there evidence of unsafe sleep factors when the infant was found?<sup>19, 21, 22</sup>** Safe sleep includes: supine, in crib, bassinet, or portable crib, with nothing in the crib but a safety approved mattress with fitted sheet. An infant placed supine and found prone, no matter his/her age or stage of development should continue down the algorithm.

No → Unexplained, No Unsafe Sleep Factors<sup>23</sup>

Yes →

**Was there evidence of a full or partial obstruction of the airway (nose, mouth, neck and/or chest)?<sup>19</sup>**

No/Unknown → Unexplained, Unsafe Sleep Factors

Yes →

**Was there evidence of what obstructed the airway when found (e.g., blanket, pillow and blanket, adult bed)?<sup>19</sup>** The team does not have to know the singular item that obstructed the airway. The following are acceptable examples: infant prone in bassinet on top of an adult sized pillow, infant face down on an adult bed, multiple/layered items identified (e.g., a mattress, sheet and blanket), and supine infant with blanket overhead even with unknown blanket weight.

No/Unknown → Unexplained, Unsafe Sleep Factors

Yes →

**Were there all of the following?**

- Non-conflicting and reliable witnessed account — Can come from a description like ‘Father reported...’ or ‘Mother saw...’, doll reenactment, or very clear complete detailed description
- No other potentially fatal findings or concerning conditions
- An age/developmental stage that made suffocation feasible (e.g., a mobile 11 month old unlikely to suffocate due to position alone)
- Strong evidence of full external obstruction when found (e.g., report of full obstruction of nose and mouth, and/or external compression of the neck or chest)

No/Unknown → Unexplained, Possible Suffocation with Unsafe Sleep Factors<sup>24, 25</sup>

Yes → Explained, Suffocation with Unsafe Sleep Factors<sup>3, 14, 25, 26</sup>

**SDY Category: Explained Suffocation<sup>3, 14</sup>**

**Which mechanism(s) explains suffocation or possible suffocation?**

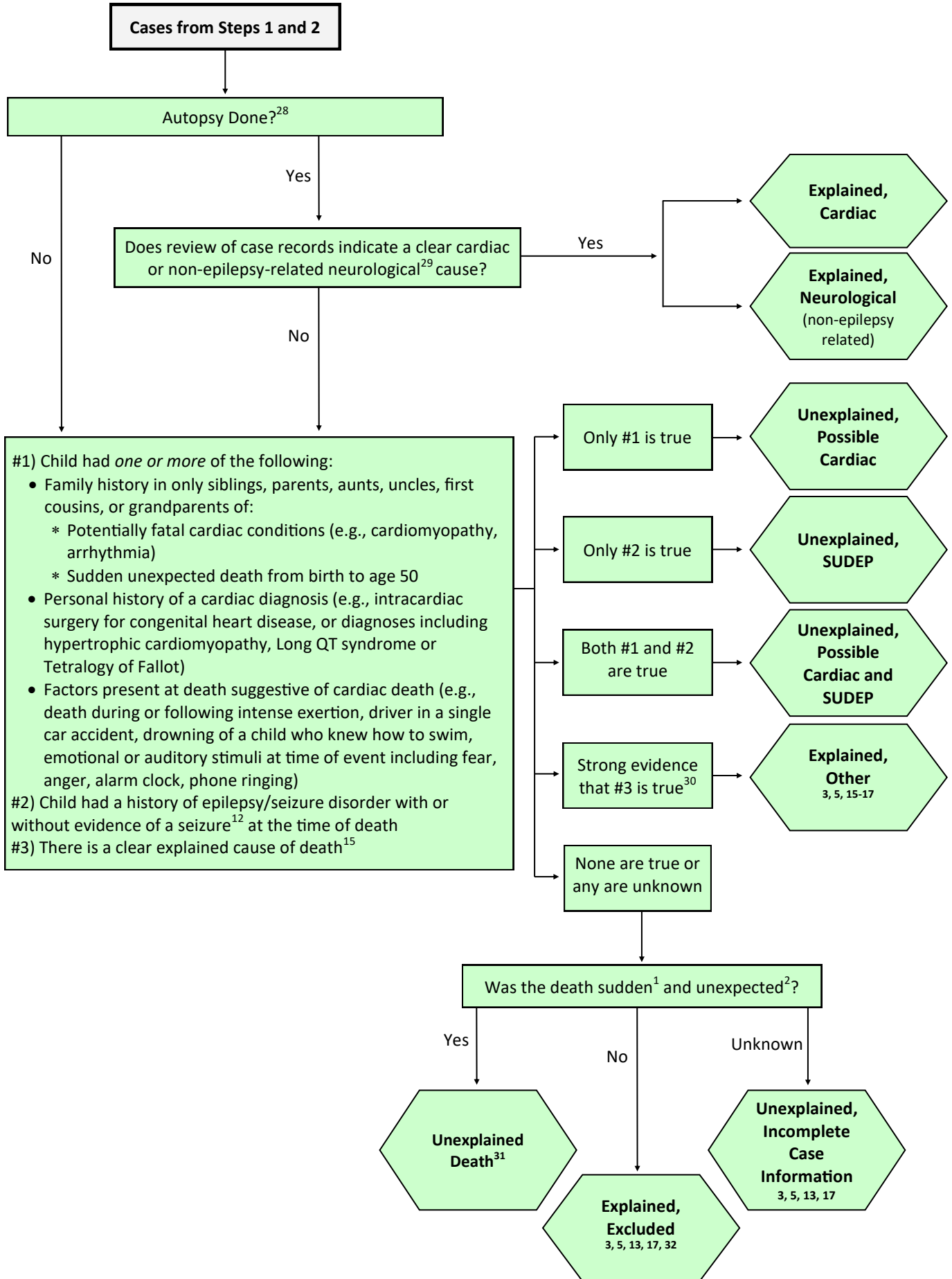
- Soft Bedding
- Wedging
- Overlay
- Other

Case Continues to Step 3 (Advanced Review)

COMPLETED AT CHILD DEATH REVIEW FOR INFANTS - SUID CATEGORIZATION<sup>26</sup>

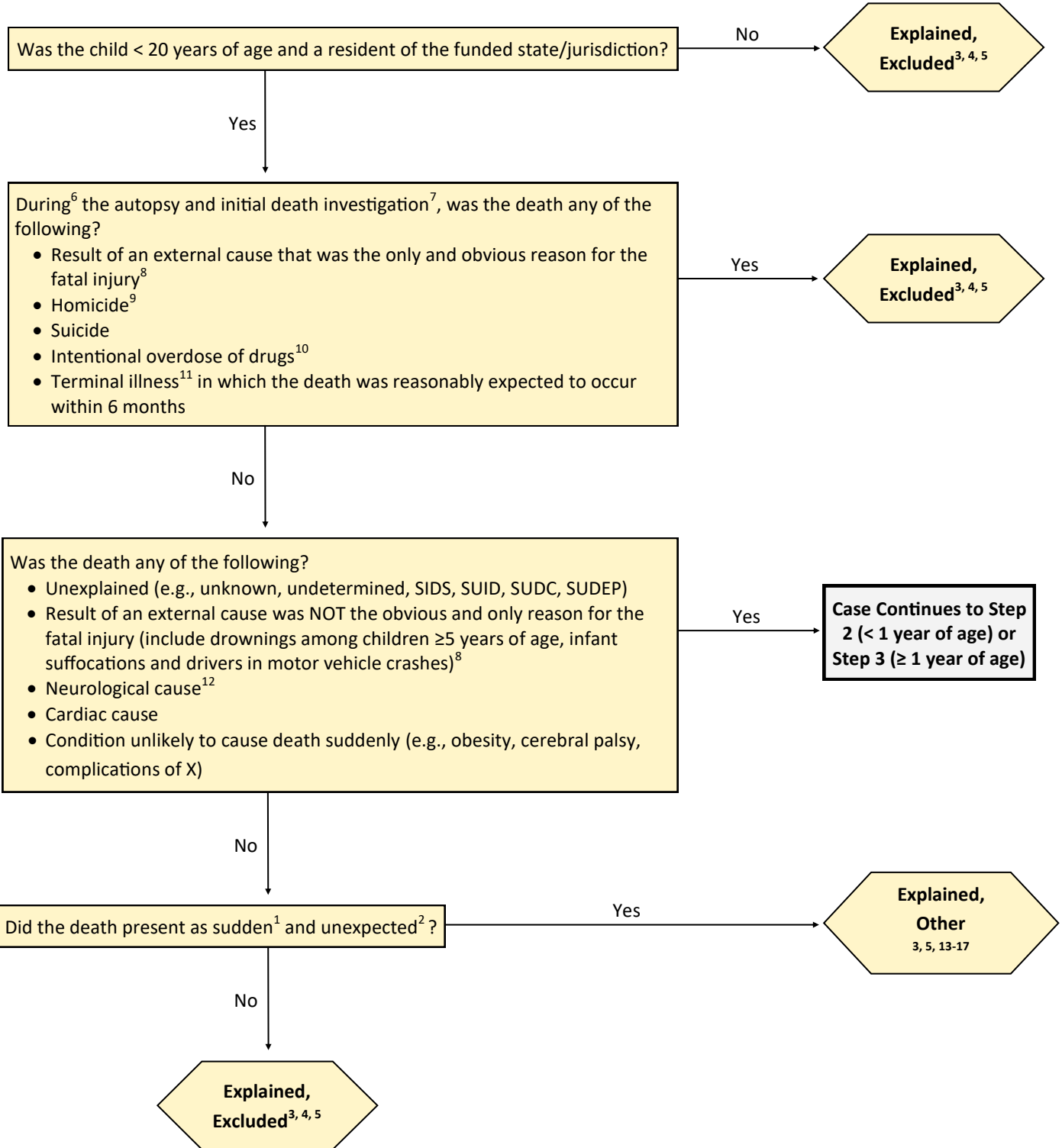
# SDY Case Registry Algorithm - Step Three

COMPLETED AT ADVANCED REVIEW



# SDY Case Registry Algorithm - Appendix

COMPLETED WHEN IDENTIFYING CASES USING VITAL RECORDS FOR CASE ASCERTAINMENT CHECK



## Footnotes

1. Sudden = Death within 24 hours of first symptom, or death in the initial hospitalization after resuscitation from a cardiac event.
2. Unexpected = Death of someone who was believed to be in good health, or have a stable chronic condition or acute illness that would not be expected to cause death.
3. No consent necessary, but if consent was obtained send it and the sample in.
4. Answer no to N1.
5. Retain all data entered.
6. This includes the initial autopsy results and death investigation; do not wait for the toxicology results.
7. Death investigation = Any agency obtaining information about the circumstances of the death; this does not need to include a visit to the scene.
8. Cases in which the underlying cause of the fatal event (e.g., drowning among children  $\geq 5$  years, infant suffocation, drivers in motor vehicle crashes, etc.) may be cardiac or neurological in origin should not be considered the 'result of an external cause that was the obvious and only reason for the fatal injury' and should continue to Step 2 or 3. Drownings among children  $< 5$  years should be excluded.  
  
Motor vehicle crashes can be categorized as Explained Other on Step 1 at the discretion of the SDY staff only when information is known for the checklist below and the information points to a true accident. Each point must be thoroughly documented in the narrative.
  - Circumstances of the crash including road conditions (e.g., dry, icy), time of day and speed
  - Condition of the driver including if they were distracted, sleep deprived, intoxicated, upset, an inexperienced at driving, or feeling sick in the day/hours leading up to the event
  - Medical history of the driver including if they had any history of fainting, seizures, arrhythmia or heart palpitations
  - Family medical history of the driver including young sudden death ( $< 50$  years old), irregular heart rhythms, unexplained fainting, motor vehicle crashes or drowning
9. Homicide = Intention to kill, not by official manner of death or if charges were filed (e.g., this excludes accidental unsafe sleep cases where charges were filed against the parents).
10. Include cases of accidental overdoses, medical treatment mishaps and adverse medication effects.
11. Terminal Illness = Diagnosis prior to death that is incurable and irreversible.
12. Exclude status epilepticus - categorize status epilepticus as Explained Other, no Advanced Review necessary.
13. Answer yes to N1.
14. No Advanced Review necessary.
15. Excludes infant suffocation cases; includes status epilepticus at the time of death.
16. Explained Other needs to be one definable cause, not "Complications of...". If the cause cannot be identified specifically and supported by autopsy evidence then it is not an explained cause of death and should be categorized as Unexplained Infant Death/SUID or Unexplained Child Death.
17. Enter at a minimum the data elements of age, sex, cause of death and category in the Case Reporting System.
18. Autopsy must include an internal exam.
19. When there is conflict:
  - Use the expertise of your multi-disciplinary team and ALL of the evidence to figure out what really happened.
  - If there is enough evidence for the team to resolve the conflict, then document the team's decision in the narrative and continue down the algorithm.
  - If the evidence does not reveal a clear resolution, then document the sustaining conflict and treat it as an unknown.
20. Consideration of lividity may be useful in verifying position, but lack of information on lividity does not make the case incomplete. Lividity that indicates supine positioning could be from flipping the infant after death and should be considered cautiously.
21. Answer no, if the infant was not sleeping.
22. Infant put in car seat...
  - To sleep, should continue down the algorithm
  - To travel, not sleep, with soft objects or loose bedding, should continue down the algorithm
  - To travel, not sleep, with no soft objects or loose bedding, should be categorized as Unexplained, No Unsafe Sleep Factors

## Footnotes

23. Includes infants who were witnessed going unresponsive.
24. Includes infants whose airways were obstructed by a Consumer Product Safety Commission approved mattress used as recommended in a crib, portable crib, or bassinet.
25. Needs to be assigned at least one mechanism using the following definitions (the following are examples, not a comprehensive list):
- **Soft bedding:** when an infant’s airway is obstructed by a blanket, sheet, pillow, couch or recliner cushions, or other soft objects of loose bedding that are part of the immediate sleep environment.
    - ⇒ Nose and/or mouth obstructed at the intersection of soft bedding (e.g., where a pillow and mattress meet, where the back and seat of a couch meet)
  - **Wedging:** when an infant’s airway is obstructed as a result of being stuck or trapped between inanimate objects.
    - ⇒ Wedged with face clear (e.g., in gap, face above mattress), chest/neck obstruction only
  - **Overlay:** when a person rolls on top of or against an infant obstructing the infant’s airway.
    - ⇒ Overlay with face clear (obstructed chest/neck only)
    - ⇒ Face into person with or without chest/neck obstruction
    - ⇒ Infant pinned between person and couch, facing person
    - ⇒ *Note: Surface sharing only is not enough evidence for overlay. An overlay needs to be witnessed (e.g., someone waking up on top of an infant, or someone seeing someone else on top of an infant).*
  - **Other:** when an infant’s airway is obstructed by something in the sleep environment other than soft bedding, overlay or wedging like a plastic bag.
    - ⇒ *Note: Other should not be selected for unsafe sleep factors like prone positioning or impaired caregivers.*
  - **Multiple mechanisms:**
    - ⇒ **Wedging and Soft Bedding**
      - \* Wedged with face into soft bedding (mattress, pillow, blankets), nose and mouth obstructed
      - \* Wrapped/entangled in blankets and wedged
    - ⇒ **Overlay and Soft Bedding**
      - \* Overlay with nose/mouth obstructed by soft bedding (mattress, pillow, blankets)
      - \* Infant pinned between person and couch, facing couch
26. Examples include:
- A 1-month-old infant found face down in a pillow with her nose and mouth fully obstructed.
  - A 2-month-old infant found with her head and face wedged between the cushions at the back of the sofa.
  - A 4-month-old infant found lifeless in a twin bed with his head and body underneath his mother.
27. Reference: Shapiro-Mendoza CK, Camperlengo L, Ludvigsen R, et al. Classification system for the Sudden Unexpected Infant Death Case Registry and its application. *Pediatrics*. 2014;134:e210-e219.
28. If extensive testing was performed during the same hospitalization as the death and identifies a cause of death, the Advanced Review Team can decide to answer “yes” to this question, even if an autopsy was not performed. Justification and explanation of why the Advanced Review Team made their decision needs to be documented in the Case Reporting System in the *Notes from Advanced Review Meeting*.
29. Includes first seizure at time of death with neurological process that could have independently led to death found on autopsy (e.g., large subarachnoid hemorrhage, meningitis, or encephalitis).
30. If Explained Other is selected, and #1 or #2 are also present, please document, in the Case Reporting System in the *Notes from Advanced Review Meeting*, the evidence supporting your choice of Explained Other over the other categories.
31. Includes all Sudden Unexpected Infant Death (SUID) cases including those the Advanced Review Team deems to be suffocation.
32. The combination of yes to N1 and the category of Excluded should only be used when a case looked like it was sudden and unexpected until the experts at the Advanced Review Team uncovered that it was not.

Shape indicates  
SUID category

Shape  
indicates SDY  
category