Appendix 1: Wake Up Safe Definitions

Explanation of fields

**Questions common to all events**

1. Patient’s Diagnoses ICD 9 code

ICD9 is a code for diagnoses. The codes entered here should be codes existing prior to surgery.

2. Patient’s Procedures (What surgery was performed)

CPT is a code for surgical procedures. The codes entered here should be the surgical procedures performed.

3. Event Month (Month event occurred)

The month the surgical procedure was performed. If the patient had several procedures, the month for the procedure when the adverse event occurred should be entered.

4. Event Year (Year event occurred)

The year the surgical procedure was performed. If the patient had several procedures, the year for the procedure when the adverse event occurred should be entered.

5. Day of week event occurred

The day of the week when the surgical procedure started. If the patient had several procedures, the day of the week for the procedure when the adverse event occurred should be entered.

6. Event time

The time when the event occurred (if known) should be entered. If the time cannot be determined, enter the time of anesthesia induction

7. Length of anesthesia procedure in minutes

Enter (in minutes) the time from anesthesia induction to anesthesia finish. This would normally be the anesthesia time for billing purposes.

8. Patient’s weight (in kilograms)

Enter the weight at the time of the start of surgery. If the weight is not known, enter an estimate.

9. Does the patient have Hispanic Ethnicity.

This is a question arising from AHRQ. Please answer according to what information is available in the chart. If information is not available, answer “unknown”.

10. Patient’s race

The choices for this question are from AHRQ. Please answer according to what information is available in the chart. If more than one race, select “more than one”. If information is not available, answer “unknown”.

11. Patient’s gender

Please answer according to the information available in the chart. If gender is unknown or indeterminate, answer unknown.

12. Patient’s age

This should be the age at the start of the procedure. If age is unknown, please estimate. Enter the number and select days, weeks, months, or years.

13. Was the patient born prematurely (less than 37 weeks gestation)?

Please answer according to the information in the chart. If gestation cannot be determined, answer unknown.

14. If premature, what was the gestational age (at birth) in weeks.

Please answer according to the information available in the chart. If a reasonably accurate estimate can be made, please do so. If not or if unknown, mark unknown.

15. After discovery of the incident, was the patient, patient’s family or guardian notified.

The intent here is to determine if the patient or family was made aware of the event by someone from the institution. Answer yes even if someone from a department other than anesthesia made the family aware of the event.

16. Prior to the procedure, what was the patients ASA status?

This determination should be based on what was known to the anesthesiologist prior to the procedure. Record what was written in the preoperative assessment.

17. Was the procedure an ASA status E case?

This determination should be based on what was known to the anesthesiologist prior to the procedure. Record what was written in the preoperative assessment.

18. Where did the event occur?

Please answer according to the best information available. If none of the options is correct, select “other” and specify the location

19. Was the patient scheduled to stay overnight?

Please base this answer on the best available information. If there was an error in scheduling, base the answer on what would be expected in your institution for similar patients having similar operations.

20. If outpatient, was the site of the event?

Select the answer that best fits the circumstances. If none of the options fit, select “other” and specify the location.

21. Did the patient originate in an ICU?

The answer to this question should reflect the location of the patient prior to coming to the anesthetizing location. For the proposes of this initiative, an ICU is a unit with high nurse to patient ratios, usually 1:1 or 1:2.

22. For the initial event was the patient an unscheduled ICU admission (unscheduled prior to induction of anesthesia)?

The answer to this question should reflect the usual plan for post op care for this type of patient having the proposed operation. It should not be answered “yes” for those patients who should have been scheduled for the ICU but were not.

23. For the initial event, if the patient was admitted to an ICU, what was the indication for admission?

The answer should reflect the feeling of the surgical and anesthesia team about why the patient needed ICU care.

24. When did the event occur?

The answer should reflect when the inciting event occurred, even if the consequences of the event occurred later. For example in the event of pneumonia from aspiration, the time should reflect when the aspiration occurred.

25. Type of anesthesia (check all that apply).

Indicate all the types of anesthesia that were used. MAC indicates monitored anesthesia care and implies sedation and or local infiltration. If a peripheral nerve block or other regional anesthetic is used, it is not a MAC case.

26. What was the target level of sedation for MAC?

For those cases with monitored anesthesia care without regional anesthesia, indicate the planned level of sedation.

27. Gaseous or volatile agents used.

Indicate all agents used during the case

28. Muscle relaxants used

Indicate all muscle relaxants used during the case

29. Intravenous, intramuscular, subcutaneous, transdermal or oral agents used.

Indicate all of these agents used, including premedication. Do not select agents that a patient was using prior to surgery (e.g. fentanyl patch)

30. Patient position at time of event.

Indicate the patient position. If the time of the event is not clear, select the position used during the majority of the procedure.

31. Who discovered the event or new injury?

Indicate who made the initial observation of the event or injury.

32. When was event discovered?

Indicate when the event or injury was first discovered. Timing starts from then end

33. How was event discovered?

Indicate how the person who first discovered the event or injury made that discovery. For most discoveries while the patient is in the hospital, the answer will be “during clinical care”.

34. If the initial event occurred in the OR, who was the hands-on anesthesia provider at the time of the event?

The time of the event should be considered to be the time when the initiating event occurred. If the attending anesthesiologist was in the OR at the time of the event, the answer should be “attending anesthesiologist”

35. Was there supervision by an anesthesiologist?

Supervision should be interpreted as meaning in the anesthetizing area and immediately available.

36. How many locations was the anesthesiologist covering at the time of the event.

This should indicate how many locations the anesthesiologist was assigned at the time of the initial event.

37. Was the event associated with a handover (hand-off)?

The answer to this question should be yes if there was a change of provider (attending, fellow, resident, CRNA, or other) within a reasonable time proximity of the event.

38. What was the extent of (residual) harm to the patient? Check the first applicable category.

The answer should reflect what the expected prognosis at the time of assessment. The most current and accurate prognosis should be used

39. At what time after discovery of the incident was harm assessed?

The answer should indicate when the prognosis was made.

40. Was the event related to:

This question asks the relative contribution of patient disease, surgical factors, anesthesia factors, and team factors. Select those answers that group or multidisciplinary evaluation felt were contributing factors.

41. What escalation of care or change in OR schedule was required?

Select those needs or outcomes that were required as a result of the event. Do not include those that the patient would have required in the absence of the event.

42. Please give a brief narrative summary of what happened.

It is not necessary to include information already entered into the form, but please indicate the pertinent factors in this event.

43. What type of event or injury occurred?

These events listed are those that are being collected by the system.

**Cardiac arrest**

1. What preexisting medical conditions (chronic or acute) were present?

Select any per-exiting conditions from the list. If the condition is not listed, select “other” and specify the condition with free text.

2. Was the procedure performed on Cardiopulmonary Bypass?

Select “yes” if any part of the procedure was on Cardiopulmonary bypass.

3. What physiologic support was the patient receiving prior to surgery?

Select any of the methods of support that were being used.

4. Which of the following was determined to be the primary cause leading to the cardiac arrest?

Select the category that best describes the primary cause of the cardiac arrest.

5. Indicate the cardiac issue that was the primary factor leading to the cardiac arrest

Indicate the cardiovascular condition that was the primary factor leading to the cardiac arrest

6. For cardiac arrests due to arterial line complications, indicate which of the following factors led to the cardiac arrest

Select the factors that led to a cardiac arrest related to arterial line complications

7. For cardiac arrests due to central line complications, indicate which of the following factors led to the cardiac arrest

Select the factors that led to a cardiac arrest related to central line complications.

8. What was insertion site of central line?

Indicate the site of insertion of the central line. For multiple insertion sites, select the site most likely related to the cardiac arrest.

9. Was central line placed in the OR?

Indicate “yes” is the placement of the line occurred in the operating room, defined as an operating room or procedure room where anesthetics are regularly delivered.

10. If yes, who placed the central line?

Indicate whether the central line was placed by a member of the anesthesia care team or a surgeon or other physician.

11. If line was placed in the OR, what devices were used?

If the central line was placed in the OR, no matter who placed it, indicate the devices used to assist in placement of the line.

12. For cardiac arrests due to medication, what class of medication was involved?

Please select the type of medication used from the list. If the medication does not fit into any of the categories, select “other” and indicate using free text the type of medication.

13. Was there a medication error?

For cardiac arrests due to medications, was there a medication error, wrong patient, dose, drug, time, route.

14. What was the response to the drug which led to the cardiac arrest?

Select up to two responses from the list or select “other” and use free text to specify.

15. For cardiac arrests due to respiratory complications (inadequate oxygenation or ventilation) what was the primary factor leading to the cardiac arrest?

Select the factor that most likely was the primary cause of the cardiac arrest.

16. If the cause of the arrest was airway obstruction, what was the etiology of the airway obstruction?

Select the cause of the airway obstruction from the list or select “other” and specify in free text.

17. Was this a Can’t Intubate Can’t Ventilate (CICV) situation? Was this a situation in which the anesthesia team was unable to intubate and also unable to ventilate.

**Final questions for all events**

1. What was the primary causative factor?

Select from the choices in the list the primary causative factor. This should be a single factor thought most likely to be the cause after the review of the event.

2. What were contributing causative factors?

Select from the list additional factors that contributed to the event. Select all that apply.

3. In your opinion, how preventable was the event or unsafe condition?

Indicate how likely the event was preventable, given current knowledge and technology.

4. In your opinion, what is the learning potential from this event?

Select from the list to indicate the ability of Wake up Safe to learn from this event and to disseminate the information to pediatric anesthesiologists.

5. Was there an unexpected final diagnosis or other information that would have influenced

anesthetic management if it had been known at the time of the anesthetic?

Was a diagnosis made after the event that would have led to a different approach to anesthesia if it had been known.

If there was a final diagnosis, what was diagnosis code (ICD-9)?

Indicate the code of the new diagnosis.