APPENDIX 1. THE SAFETY ASSESSMENT CODE (SAC) MATRIX

This appendix reproduces a modified version of the VA National Center for Patient Safety's Safety Assessment Code Matrix as an example of a risk-based prioritization methodology for ranking hazards, vulnerabilities, and events so that an organization can consistently and transparently decide how to utilize its available resources to determine which risks to study and mitigate first. Five sample scenarios and their assessments are provided on pages 25–30.

Any event prioritization tool such as the SAC Matrix presented in this appendix should meet local organizational regulatory requirements and standards as well as those of applicable accrediting and regulatory organizations. For a prioritization tool's use to be successful, a system should be instituted to ensure that the tool is updated periodically to reflect changes in applicable requirements, regulations, and standards.

THE SAFETY ASSESSMENT CODE (SAC) MATRIX

The Severity Categories and the Probability Categories that are used to develop the Safety Assessment Codes (SACs) for adverse events and close calls are presented in the following, and are followed by information on the SAC Matrix.

1. SEVERITY CATEGORIES

a. Key factors for the severity categories are extent of injury, length of stay, level of care required for remedy, and actual or estimated physical plant costs. These four categories apply to actual adverse events and potential events (close calls). For **actual adverse events**, assign severity based on the patient's actual condition.

b. If the event is a **close call**, assign severity based on a reasonable "worst case" systems level scenario. ***NOTE:*** *For example, if you entered a patient's room before they were able to complete a lethal suicide attempt, the event is catastrophic, because the reasonable "worst case" is suicide.*

Catastrophic	**Major**
Patients with Actual or Potential: Death or major permanent loss of function (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying condition** (i.e., acts of commission or omission). This includes outcomes that are a direct result of injuries sustained in a fall; or associated with an unauthorized departure from an around-the-clock treatment setting; or the result of an assault or other crime. Any of the adverse events defined by the Joint Commission as reviewable "Sentinel Events" should also be considered in this category. **Visitors:** A death; **or** hospitalization of three or more visitors **Staff**: A death or hospitalization of three or more staff*	**Patients with Actual or Potential:** Permanent **lessening** of bodily functioning (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying conditions** (i.e., acts of commission or omission) **or** any of the following: a. Disfigurement b. Surgical intervention required c. Increased length of stay for three or more patients d. Increased level of care for three or more patients **Visitors:** Hospitalization of one or two visitors **Staff:** Hospitalization of one or two staff **or** three or more staff experiencing lost time or restricted duty injuries or illnesses **Equipment or facility:** Damage equal to or more than $100,000**,♦
Moderate	**Minor**
Patients with Actual or Potential: Increased length of stay **or** increased level of care for one or two patients **Visitors:** Evaluation **and** treatment for one or two visitors (less than hospitalization) **Staff**: Medical expenses, lost time or restricted duty injuries or illness for one or two staff **Equipment or facility:** Damage more than $10,000, but less than $100,000**,♦	**Patients with Actual or Potential:** No injury, nor increased length of stay nor increased level of care **Visitors:** Evaluated and no treatment required **or** refused treatment **Staff:** First aid treatment only with no lost time, nor restricted duty injuries nor illnesses **Equipment or facility**: Damage less than $10,000 or loss of any utility without adverse patient outcome (e.g., power, natural gas, electricity, water, communications, transport, heat and/or air conditioning)**,♦

*Title 29 Code of Federal Regulations (CFR) 1960.70 and 1904.8 requires each Federal agency to notify the Occupational Safety and Health Administration (OSHA) within 8 hours of a work-related incident that results in the death of an employee or the in-patient hospitalization of three or more employees. Volunteers are considered to be non-compensated employees.

**The Safe Medical Devices Act of 1990 requires reporting of all incidents in which a medical device may have caused or contributed to the death, serious injury, or serious illness of a patient or another individual.

♦The effectiveness of the facilities disaster plan must be critiqued following each implementation to meet The Joint Commission's Environment of Care Standards.

2. PROBABILITY CATEGORIES

a. Like the severity categories, the probability categories apply to actual adverse events and close calls.

b. In order to assign a probability rating for an adverse event or close call, it is ideal to know how often it occurs at your facility. Sometimes the data will be easily available because they are routinely tracked (e.g., falls with injury, Adverse Drug Events (ADEs), etc.). Sometimes, getting a feel for the probability of events that are not routinely tracked will mean asking for a quick or informal opinion from staff most familiar with those events. Sometimes it will have to be your best educated guess.

Like the severity categories, the probability categories apply to actual adverse events and close calls.

c. In order to assign a probability rating for an adverse event or close call, it is ideal to know how often it occurs at your facility. Sometimes the data is easily available because the events are routinely tracked (e.g., falls with injury, ADEs, etc.). Sometimes, getting a feel for the probability of events that are not routinely tracked will mean asking for a quick or informal opinion from staff most familiar with those events. Sometimes it will have to be the best educated guess.

(1) **Frequent** – Likely to occur immediately or within a short period (may happen several times in 1 year).

(2) **Occasional** – Probably will occur (may happen several times in 1 to 2 years).

(3) **Uncommon** – Possible to occur (may happen sometime in 2 to 5 years).

(4) **Remote** – Unlikely to occur (may happen sometime in 5 to 30 years).

3. How the Safety Assessment Codes (SAC) Matrix Looks

Probability and Severity	Catastrophic	Major	Moderate	Minor
Frequent	**3**	**3**	**2**	**1**
Occasional	**3**	**2**	**1**	**1**
Uncommon	**3**	**2**	**1**	**1**
Remote	**3**	**2**	**1**	**1**

4. How the SAC Matrix Works. When a severity category is paired with a probability category for either an actual event or close call, a ranked matrix score (3 = highest risk, 2 = intermediate risk, 1 = lowest risk) results. These ranks, or SACs, can then be used for doing comparative analysis and for deciding who needs to be notified about the event.

5. Reporting

a. All known reporters of events, regardless of SAC score (one, two, or three), must receive appropriate and timely feedback.

b. The Patient Safety Manager, or designee, must refer adverse events or close calls related solely to staff, visitors, or equipment and/or facility damage to relevant facility experts or services on a timely basis, for assessment and resolution of those situations.

Based on Department of Veterans Affairs, Veterans Health Administration, *VHA Patient Safety Improvement Handbook 1050.01*, May 23, 2008. Available at http://cheps.engin.umich.edu/wp-content/uploads/sites/118/2015/04/Triaging-Adverse-Events-and-Close-Calls-SAC.pdf