Assessment Tool for a Problem-Solving (Proposal) A3

A3 Title: (Ex. 2) Improving the Status of Status Epilepticus

Author: XXXXX   **Reviewer:** XXXXX   **Date:** XXXXX

Items (based on A3 Template) and Rating Scale	Rating

Background   *Why is the problem important?*

1. **Negative consequences** (e.g., harm, frustration, waste): how specific is the clearest statement of a negative consequence of the problem?

0. Not addressed	1. Unclear	2. General (eg, "harm," "difficulties," "waste")	3. Specific type of consequence	**3**

> Rating. 3. Specific type of consequence
>
> Explanation. In Background: "Prescribing less effective medications increases the <u>potential for poor clinical outcomes</u> in these patients" (i.e. patients with status epilepticus). One clearly specified impacted entity is sufficient for the rating.
>
> *Note: The statement "the <u>impact of status epilepticus</u> on affected patients <u>is substantial</u>" refers to the general clinical impact of status epilepticus rather than to the negative consequences of the performance problem of prescribing less effective medications.*
>
> Would be "2. General" if the author had stated broadly that prescribing less effective medications could cause "problems" for patients.

2. **Individuals/groups** impacted by the negative consequences (e.g., harm, frustration, waste): how specific is the clearest statement identifying an impacted individual, group/unit, or organization?

0. Not addressed	1. Unclear	2. General (eg, "staff," or "patients," but not which)	3. Specific individual, group, or organizational unit	**3**

> Rating. 3. Specific individual, group, or organizational unit
>
> Explanation. In Background: "Prescribing less effective medications increases the potential for poor outcomes in <u>these patients" (i.e. patients with status epilepticus)</u>. One clearly specified impacted entity is sufficient for the rating.
>
> Would be "2. General" if the author had implied or stated broadly that patients were impacted without clarifying specifically "patients with status epilepticus."

3. **Severity** of the negative consequences (e.g., harm, frustration, waste): how specific is the clearest statement of the severity (e.g., extent/amount) of at least one negative consequence?

0. Not addressed	1. Unclear	2. General (eg, significant harm)	3. Specific extent/amount	**2**

> Rating. 2. General (eg, significant harm)
>
> Explanation. In Background: "Prescribing less effective medications increases the potential for <u>poor outcomes</u> in these patients." While the general nature of the negative consequences is indicated by "poor outcomes," the extent/severity of the poor outcomes is not specified.
>
> Would be "1. Unclear" if the author had implied or stated simply that using other medication would be "less effective" with no indication of the nature of the harm or degree of severity of consequences/impacts.
>
> Would be "3. Specified (extent/amount of at least 1 consequence)" if the author had specified a specific degree of severity of the negative consequences of prescribing less effective medications (e.g., % mortality, type of morbidity, prolonged hospitalization, amount of healthcare costs).

4. **Frequency** of the negative consequences (e.g., harm, frustration, waste): how specific is clearest statement of the frequency (# events/unit of time) of at least one negative consequence?

0. Not addressed	1. Unclear	2. General (eg, rare, often)	3. Specific frequency (eg, events per unit of time)	**1**

> Rating. 1. Unclear
>
> Explanation. In Background: The only information provided is "the <u>potential for poor outcomes</u> in these patients." No information is provided regarding how frequently that prescribing less effective medications results in poor outcomes.

Note: The Problem Statement indicates how frequently the performance problem (less effective medications prescribed) occurs, which is different than the frequency of negative consequences resulting when the performance problem occurs.

Would be "0. Not Addressed" if the author did not refer to the occurrence of negative consequences when the performance problem occurred (i.e. when less effective medications were prescribed).

Would be "2. General (e.g., rare, often)." if the author had indicated a general sense of relative frequency (e.g., occasionally, frequently).

➢ Extent to which important negative consequences (e.g., harm, frustration, waste) are identified?

| None | Inadequate | Adequate | Thorough | Cannot assess |

Cannot assess

Background – reviewer comments:

Current Situation *What is actually happening?*

5. Current level of performance

| 0. Not addressed | 1. General words, but no data | 2. Some data | 3. Thorough and robust data |

3

Rating. 3. Thorough and robust data

Explanation. In Background: "In the last two fiscal years, only 26% of patients presenting to Hospital of the University of Pennsylvania (HUP) for initial treatment of unremitting seizures were treated in accordance with the status epilepticus anti-epileptic drug treatment protocol." In Current State, there is a pareto chart and a pie chart that illustrate the data.

Would be "2. Some data" if the author had made a general quantitative statement about performance (e.g., less than half of the time) or had provided data for small number of patients (e.g., less than 5) so that confidence in the data was uncertain.

6. How is work done (process/workflow)?

| 0. Not addressed | 1. Addressed, but unclear | 2. Illustration/ description somewhat clear | 3. Illustration/ description very clear |

2

Rating. 2. Illustration/description somewhat clear

Explanation. In Current Situation: the diagram shows the sequence of the choice of anti-epileptic medications, with each arrow representing an instance of drug selection. However, no information is provided for who is involved (e.g., who orders the anti-epileptic, how it is selected) or for some steps (e.g., patient arrival and how/who determines diagnosis to initiate ordering, how and when the medication reaches the patient).

Would be "1. Addressed, but unclear" if the author had provided some narrative that could not be easily followed or a process map that could not be interpreted.

Would be "3. Illustration/description very clear" if the author had laid out a complete process sequence depicting who is involved at each step.

7. Clear identification of who is involved in performing the work?

| 0. Not addressed | 1. Unclear | 2. Somewhat clear | 3. Very clear |

0

Rating. 0. Not addressed

Explanation. No process map or written statement on the A3 indicates who is involved in performing the work of treating a patient with status epilepticus.

Would be "1. Unclear" if the author had written general statements about the people involved in the work (e.g., nurses, physicians, pharmacists), but did not indicate who was doing what work.

8. Performance problem/gap?

| 0. Not addressed | 1. Unclear | 2. Partially specified | 3. Clearly specified/quantified |

3

Rating. 3. Clearly specified/quantified

Explanation. In Background under Problem Statement heading: "In the last two fiscal years, only 26% of patients presenting to Hospital of the University of Pennsylvania (HUP) for initial treatment of unremitting seizures were treated in accordance with the status epilepticus anti-epileptic drug treatment protocol. Poor adherence to this protocol leads to unnecessary variations in care and delayed, less effective treatment."

Would be "2. Partially specified" if the author had written the performance problem/gap with some general information (e.g., "less than half") or did not state the time frame for the measurement.

➢ Extent to which the A3 author demonstrates direct observation of the work process?

Not observed	A little	Some	All	Cannot assess

Cannot assess

➢ Extent of demonstration of learning from the people involved in the process?

None	A little	Some	All	Cannot assess

Cannot assess

Current Situation – reviewer comments:

Goal *What target condition or specific performance is desired? By when?*

9. How specific is the goal?

0. Not addressed	1. Vague	2. Somewhat specific	3. Very specific

3

Rating. 3. Very specific

Explanation. In Target Condition: "To improve adherence to the status epilepticus protocol from <u>26% to 80%</u> for patients with unremitting seizures presenting to HUP in the year following countermeasure implementation."

Would be "2. Somewhat specific" if the author made a relative statement (e.g., improve status epilepticus anti-epileptic drug treatment protocol by 55 percentage points) without specifying the baseline (or target goal).

10. Is the goal measurable?

0. Not addressed	1. Not measurable	2. May be measurable	3. Clearly measurable

3

Rating. 3. Clearly measurable

Explanation. In Target Condition: "To improve adherence to the status epilepticus anti-epileptic drug treatment protocol <u>from 26%</u> to 80%." This statement indicates that "adherence to the status epilepticus anti-epileptic drug treatment protocol" has been measured in the past and therefore is likely to be measurable in the future.

Would be "2. May be measurable" if the author included a goal statement for an aspect of performance that has not been measured (e.g., no baseline data), but may be measurable from routinely available data sets (e.g., in an electronic health record).

➢ How achievable is the goal?

Not achievable	Unlikely	Possibly	Probably	Cannot assess

Cannot assess

11. How relevant is the goal to addressing the problem?

0. Not addressed	1. Not relevant	2. Somewhat relevant	3. Very relevant

3

Rating. 3. Very relevant

Explanation. In Target Condition: "To improve <u>adherence to the status epilepticus anti-epileptic drug treatment protocol from 26% to 80%</u> for patients with unremitting seizures…" In Problem Statement: "<u>In the last two fiscal years, only 26% of patients</u> presenting to Hospital of the University of Pennsylvania (HUP) for initial treatment of unremitting seizures <u>were treated in accordance with the status epilepticus anti-epileptic drug treatment protocol</u>." Thus the goal directly addresses the problem statement/performance gap.

Would be "2. Somewhat relevant" if the author had stated a goal that was generally related to the problem statement (i.e. goal discussed improving care for status epilepticus without clearly addressing the problem of adherence to the protocol).

12. How time-bound (clear timeframe for accomplishment) is the goal?

0. Not addressed	1. Unclear	2. Somewhat clear (eg, relative timeframe)	3. Very clear (eg, date specified)

2

Rating. 2. Somewhat clear (e.g., relative timeframe)

Explanation. In Target Condition: ". .in the year following countermeasure implementation." This statement provides a relative timeframe, with the beginning date (following countermeasure implementation) unknown.

Would be "1. Unclear" if the author had simply said "over the next year" and did not include the phrase "following countermeasure implementation" to indicate a relative starting point.

Would be "3. Very clear (e.g., date specified)" if the author had stated a timeframe with a specified date for achieving the goal (e.g., by June 30, 2017).

Goal – reviewer comments:

Analysis *What is contributing to the problem? What are its root causes?*

13. Is the display of method(s) for analyzing root causes easy to understand? (e.g., fishbone diagram, "5-whys"/root cause tree diagram, Pareto chart)

| 0. Not displayed | 1. Not understandable | 2. Partially understandable | 3. Easy to understand |

3

Rating. 3. Easy to understand

Explanation. In Analysis: Fishbone diagram with clear categories and text. *Note: Usually the problem would be listed at the "head" of the fish. In this case the problem is listed in the title of the fishbone diagram.* The "four"-whys analysis has logic that is easy to follow and understand

Would be "2. Partially understandable" if the author included 1 or more visuals with some parts that were understandable and some of the logic could be followed, but other parts were unclear.

14. How clear are the identified root causes?

| 0. Not addressed | 1. Unclear | 2. Somewhat clear | 3. Very clear |

3

Rating. 3. Very clear

Explanation. In Analysis: The description of the identified root causes of the problem is clear by category (on a fishbone diagram). The analysis is even more detailed by identifying the most common causes (on a 5-whys analysis). Additionally, sources of input are listed.

Note: the statement of the "alternative" of fosphenytoin is a proposed solution that more typically would have been listed in the Countermeasure section.

Would be "2. Somewhat clear" if the author had written statements or included visuals from which you could understand some of the indicated root causes, but not others.

➢ Extent to which important root causes are identified?

| None | Inadequate | Adequate | Thorough | Cannot assess |

Cannot assess

Analysis – reviewer comments:

Countermeasures *What options/alternatives were considered? What countermeasures/strategies are proposed?*

15. How many options for countermeasures were considered?

| 0. None | 1. One | 2. Two | 3. Three or more |

3

Rating. 3. Three or more

Explanation. In Countermeasures: the Root Cause-Countermeasures table presents three separate bulleted countermeasures that were considered. *Note: In this A3 the author placed the recommendation to initiate the first two countermeasures and to defer the third countermeasure in the Action Plan section rather than in the Countermeasure section.*

Would be "2. Two" if the author had included only two countermeasures.

16. <u>Identify the strongest countermeasure considered. How strong is it?</u>

0. No counter-measures	1. Weak (eg, policy change, education and training)	2. Intermediate (eg, standard work/roles, just-in-time reminders, or visual/cognitive aids)	3. Strong (eg, "forcing function" that ensures work done right way)

2

> <u>Rating.</u> 2. Intermediate (eg, standard work/roles, just-in-time reminders, or visual/cognitive aids
>
> <u>Explanation.</u> In Countermeasures: the "countermeasures" column in the table lists three that were considered. The first countermeasure is "intermediate," substituting fosphenytoin for phenytoin in the treatment protocol, which changes the actual work to perform. The other two countermeasures are "weaker" education and training activities (disseminate the new protocol, develop a curriculum) that make people aware of the protocol and the rationale for the recommended drug. Other "intermediate" strength countermeasures might be changing work roles (e.g., restricting prescribing for this condition to a set of specially trained individuals), just-in-time reminders (e.g., an alert on an electronic prescribing system when something other than fosphenytoin is prescribed for status epilepticus), or a visual reminder (e.g., a copy of the treatment protocol posted in staff rooms).
>
> Would be "1. Weak (eg., policy change, education and training)" if only the educational activities were proposed.
>
> Would be "3. Strong (eg., 'forcing function' that ensures work is done the right way)" if the author had listed a forcing function (e.g. providers were required to order any/all anti-epileptic through a status epilepticus order set that had fosphenytoin pre-selected; if a prescriber wanted to order a drug for status epilepticus other than fosphenytoin, the prescriber is required to obtain a pharmacy or neurology consultation in order to ensure the most evidence-based drug was ordered).
>
> *Note: Although strong countermeasures are not always feasible, combining two or more weak or intermediate countermeasures may be sufficient.*

17. <u>How many of the proposed countermeasures are linked to identified root causes?</u> *(Review each countermeasure and see if it addresses a root cause identified in the Analysis Section.)*

0. None linked to causes	1. Minority linked to causes	2. Majority linked to causes	3. All linked to causes

3

> <u>Rating.</u> 3. All linked to causes
>
> <u>Explanation.</u> In Proposed Countermeasures, the table lists the root cause and the related countermeasures. The first countermeasure addresses the logistical and safety concerns with phenytoin, which were displayed in the 4-whys diagram in the Analysis section as well as addressed on the fishbone diagram. The next 2 countermeasures address the lack of knowledge about status epilepticus treatment and its protocol, which was indicated as one of the problem "bones" in the fishbone diagram in the Analysis section.
>
> Would be "2. Majority linked to causes" if the majority (i.e. more than half), but not all, of the countermeasures were explicitly linked to (address) root causes.

➤ <u>To what extent are countermeasures feasible to carry out?</u>

Not feasible	Unlikely	Possibly	Highly likely	Cannot assess

Cannot assess

➤ <u>How likely will countermeasures result in achieving the goal?</u>

Not possible	Unlikely	Possibly	Highly likely	Cannot assess

Cannot assess

Countermeasures – reviewer comments:

Action Plan *To pilot & implement the selected countermeasures: what, who, when?*

18. <u>For the action plan on the A3, how clearly are activities described (i.e. "what" is to be done)?</u>

0. Not addressed	1. Unclear	2. Somewhat clear	3. Very clear

3

> <u>Rating.</u> 3. Very clear
>
> <u>Explanation.</u> In Action Plan: for the two countermeasures that are to be addressed now, three actions are listed ("what" is to be done). The first countermeasure has two actions (1a. petition UPHS pharmacy to obtain fosphenytoin; 1b.

rewrite the status epilepticus protocol) and the second countermeasure has one action (2. develop plan to disseminate the treatment protocol).

Would be "2. Somewhat clear" if an action plan has some statements about what is to be done that are vague and others that are clear.

19. Are individuals identified to be responsible for each action item to be carried out (i.e. "who")?

    0. Not addressed   1. For the minority   2. For the majority   3. For all

2

Rating. 2. For the majority

Explanation. In Action Plan: individuals or groups ("who") are identified for first countermeasure's first action (1a. "Katherine") and for the second countermeasure's action (2. "Katherine and Dr. Patrick"). However, no one is identified for to perform the first countermeasure's second action (1b. complete first draft).

Would be "3. For All" if the author had identified individuals to carry out actions for all of the activities.

20. Are estimated completion dates identified for each action item (i.e. "when")?

    0. Not addressed   1. For the minority   2. For the majority   3. For all

1

Rating. 1. For the minority

Explanation. In Action Plan: only one of the three actions has a clear estimated completion date ("by when"). A clear completion date is identified for the action of rewriting the treatment protocol (1b. "by 2/1/17"). The other two actions have vaguely stated timeframes (1a. "goal of obtaining this drug by early spring" and 2. "will complete this spring with plans to roll-out this summer.") "Spring" and "summer" are not practically useful for knowing when to follow up to see if work has been performed.

Would be "0. Not addressed" if no estimated completion dates were listed or if all were vague.

Would be "2. For the majority of action items" if the author had listed multiple action plan activities and estimated time frames were identified for the majority of activities (e.g., 2 of the 3 activities).

21. How clear is the plan for monitoring the implementation of actions in 18-20 above (what will be monitored, by whom, when)?

1

0. Not addressed	1. Plan unclear (no or minority of actions monitored – what, who, when)	2. Plan partially clear (majority of actions monitored – what, who, when)	3. Plan clear (all actions monitored – what, who, when")

Rating. 1. Unclear

Explanation. The Monitoring Plan only partially addresses the first action in the Action Plan and does not address the other two of the actions in the Action Plan. The Action Plan lists two activities for the first countermeasure (1a and 1b) and one activity for the second countermeasure. For the first countermeasure's first action (1a. "Petition UPHS pharmacy administration to obtain fosphenytion"), the Monitoring Plan addresses components of implementing this action ("Dr. Knox to follow-up on pharmacy administration discussions"). While the individual ("who") is identified to carry out this check ("Dr. Knox"), the time frame ("when") the follow-up will occur is not clear. No monitoring ("who will check when") is addressed for either of the other two actions in the Action Plan (1b. rewriting the protocol, 2. develop plan to disseminate the protocol).

Would be "0. Not addressed" if monitoring was not addressed for any of the three action activities.

Would be "2. Partially clear" if monitoring was addressed for at least a second activity and both checks addressed "what would be monitored, by whom, and when." That would result in the majority of the action plan activities (two of the three) being monitored.

➤ How adequate is the action plan?

    Not adequate   Possibly   Probably   Very likely   Cannot assess

Cannot assess

Action plan – reviewer comments:

Follow-up Plans *Checking whether desired goal(s) was achieved?*

22. Is follow-up planned to <u>measure achievement of the desired goal(s) (what will be measured, by whom, when)</u>?

| **0** |

    0. Not addressed   1. Plan unclear (no more than one of "what, who, when")   2. Plan partially clear (two of "what, who, when")   3. Plan clear "(what, who, when")

> <u>Rating.</u> 0. Not addressed
>
> <u>Explanation.</u> The A3 does not address measuring achievement of the desired goal, (i.e. improving adherence to the new status epileptics anti-epileptic drug treatment protocol).
>
> Would be "1. Unclear" if measuring achievement of the desired goal addressed one element of "who is to do what, when."

Across A3 Sections

23. How clearly does the title identify the problem to be addressed?

| **2** |

    0. No title   1. Unclear   2. Somewhat clear   3. Very clear

> <u>Rating.</u> 2. Somewhat clear
>
> <u>Explanation.</u> Title: "Improving the Status of Status Epilepticus" identifies in general that something needs to be improved regarding status epilepticus. However, the title does not indicate that the problem is with poor adherence to the treatment protocol.
>
> Would be "1. Unclear" if a title were listed but is completely unclear what the problem is that the A3 is addressing (e.g., "Needed Improvement in Patient Care").
>
> Would be "3. Very clear" if the title indicated the specific problem being addressed (e.g., "Improving Adherence to Evidence-based Practice Guidelines for Status Epilepticus").

➢ How often does the logic flow clearly from one section of the A3 to the next section?

| Cannot assess |

    Not at all   Occasionally   Majority   Always   Cannot assess

➢ In general, how informative are the visual illustrations?

| Cannot assess |

    None used or not informative   Not very informative   Somewhat informative   Very informative   Cannot assess

Across A3 Sections – reviewer comments:

>

OVERALL RATING (items 1 – 23)

Total points (max = 69)

| **51** |

Mean (divide total by 23 items)
Note: check that all 23 numbered items have been answered. Missing answers are coded "0."

| **2.2** |