User story: Healthcare Safety Event Classification Suggestions (Quantros)

Healthcare Safety Event Classification Suggestions

As a hospital Quality and Safety specialist, I want the system to help event submitters accurately classify a safety event type, so I have information to use in determining which department will follow-up with an analysis. Incorrect classification of an event causes re-work, since follow-up questions on the form are based on the classification, and if the classification is changed, different questions display on the form. I then lose time attempting to track down a submitter or witness who can provide answers to the appropriate form questions.

Today, the system requires the submitter to select a classification by picking a high-level category (drop-down selection), then selecting a more granular option for the selected category (another drop-down), and potentially another more granular option (another drop-down). Because of this design, submitters need to have some familiarity of how the safety event hierarchy is organized. Submitters complain of the difficulty in correcting a first guess, and sometimes intentionally leave an incorrect classification or abandon the form entirely because they are unable to find a classification that fits.

This new feature will provide suggestions to the submitter based on the textual description they provide near the beginning of the form ("Briefly describe what happened"). The system will analyze the words and phrases included in the description of what occurred, comparing them to the descriptions of all previously submitted reports submitted by hospitals using the product, and suggesting the most likely classification for the new event. The suggested classifications should display just below the textual description ("Briefly describe what happened"). In addition to the suggestions, the submitter can also navigate the taxonomy from any level of a suggestion or search the taxonomy (see User Story #245 and #258).

The number of suggestions listed in the results is neither all possible classifications correlating with the words and phrases in the textual description of the event, nor a set number. For instance, if the system identifies 20 classifications that correlate, but most of the matches are to 4 of the classifications, and there is a significant drop in the number of correlating to the 5th classification, then just the 4 strongest should comprise the list. For example, if the word "bedsore" is most frequently correlated with the classification "Pressure ulcer" with 10,000 matches, and then "non-healing wound" with 8,000 matches, and then the next classification has only 500 matches, then the suggestion list should only show the first two.

All suggestions should always display the full "path" of the classification in the taxonomy, so the user has necessary context. For example, the classification "Monitoring failure" could appear in the taxonomy under "Skin integrity" or under "Adverse medication reaction".

In cases where the description does not have strong correlation to any existing classification, the system should prompt the user to revise or add to their description of the event to attempt again.

Mockup on next page

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* Briefly describe what happened

Patient had healed a prior stage 2, pre-sacral decubitus ulcer. Noted stage 1 changes and was positioned on side with pillow roll but kept working back to recumbent position; has now developed stage 2 ulcer.

See an Example

Please include:
• Brief overview
• Impact on patient
• Immediate interventions

* In which safety event category would you place this event?

Suggested matches

Analysis of the information above suggests the following safety event classification. Please choose the best fit.

Pressure (Decubitus) Ulcer
Safety category: Skin Integrity   almost… show similar

Non-Healing Wound
Safety category: Skin Integrity

Positioned or Handled Inappropriately
Safety category: Radiology & Radiotherapies   almost… show similar

Positioned or Handled Inappropriately
Safety category: Skin Integrity

View mockups on Confluence for additional use cases

Acceptance criteria

- When a description of a safety event is entered and the user tabs out of the field, the system will analyze the text and, if there are matches, list the closest suggestions in the taxonomy for the user to select from.
- Each suggestion indicates the full path within the taxonomy. The user can select either from the suggested items, or can click the category above it in the taxonomy (indicated in mockup as "Safety category:...", and navigate the taxonomy in a flyout menu to find all options within that category.
- If a description of the safety event has been entered, and there are no matching suggestions in the taxonomy, the system shall prompt the user to revise or add onto the description. If the system is still unable to provide suggestions, display the top-level options in the taxonomy so the user can navigate to the desired option, and also display a search field so the user can alternately search to locate the desired option.
- Each suggestion can be clicked to select. If there are lower-level options providing more detail, the system will display them so the user can select from the most specific options in the taxonomical branch.
- Suggestions with related or similar options in the taxonomy can be navigated to from the suggestion ("almost…show similar"). These typically are the other options within the same category but they may cross multiple categories, as shown in the mock-up.