Towards Personalised Clinical Management of Self-Harm through Data-Driven Clinical Decision Support using Transnational Electronic Registry Data (PERMANENS)

FINDINGS FROM THE THIRD UAG - CLINICIANS

(IRELAND, SPAIN, NORWAY, SWEDEN)

General notes:

- Duration: 1 - 1.5 hours
- Participants: **Clinicians**
- Conducted online via MS Teams/In person

CURRENT CDSS RISK STRATIFICATION MODULE

a. Data Interface and Input

- Clinicians across all locations found the data input process straightforward. The interface was described as simple and easily usable with well-defined categories for entering clinical scenarios.

b. Risk Stratification Score

- *Participants across all locations* expressed difficulty understanding the meaning of statistical abbreviations such as RR, OR, D8, D9, and D10 (Figure 1). The current format appeared more suited for researchers rather than frontline clinicians. It was suggested that the risk stratification chart should include explanatory question marks or icons to help interpret what a decile means (which population group it corresponds to, what the outcome is, and the time window), as well as explanations of probability and incidence.
- Clinicians also found numerical values like “0.74” difficult to interpret in a clinical context without clear reference points (e.g., high, medium, low risk)(Figure 1). Providing a brief, plain-language explanation of how the score should be interpreted in clinical decision-making could be useful.
- Feedback emphasized replacing statistical abbreviations with user-friendly, clinically relevant terms, such as “High Risk,” “Moderate Risk,” and “Low Risk.”

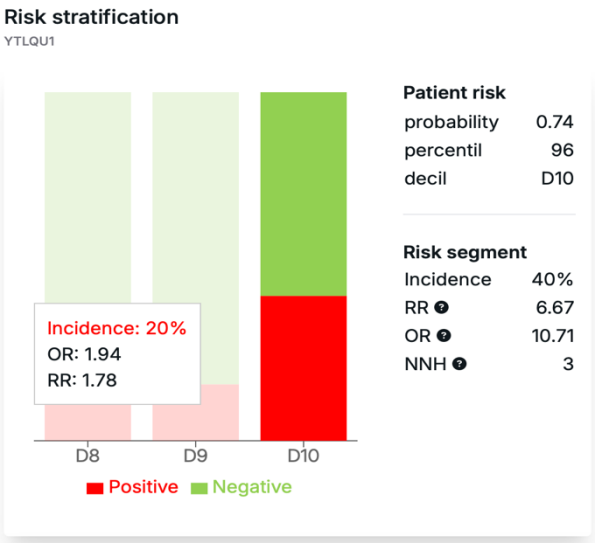


Figure 1: Risk scores

c. Predictor Importance

- While participants found predictor importance graphs helpful, they were sometimes confusing. For instance, when the Emergency Department (ED) list was noted "0," within the second Clinical Scenario, a negative graph appeared without clear explanation (Figure 2).

- Participants were uncertain whether there was an implied "zero line" in the graph. Without labelled axes or clear legends, interpretation was challenging (Figure 2). It was suggested that providing a brief explanation or tooltip within the CDSS manual to guide interpretation of the graph.

- It was also suggested to use different colours for different variables and clearly labelling axes (e.g., marking zero on both X and Y axes) would make graphs more understandable.

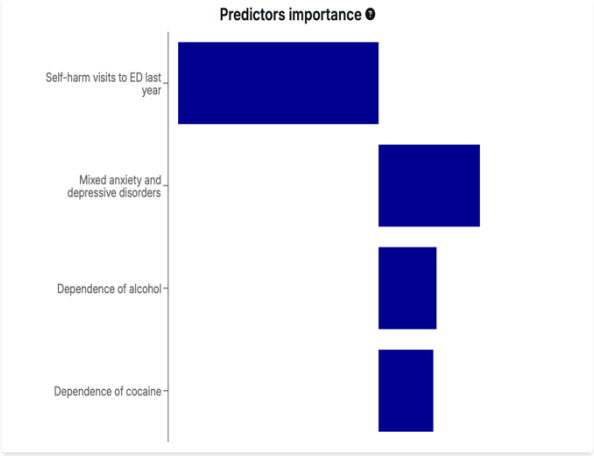


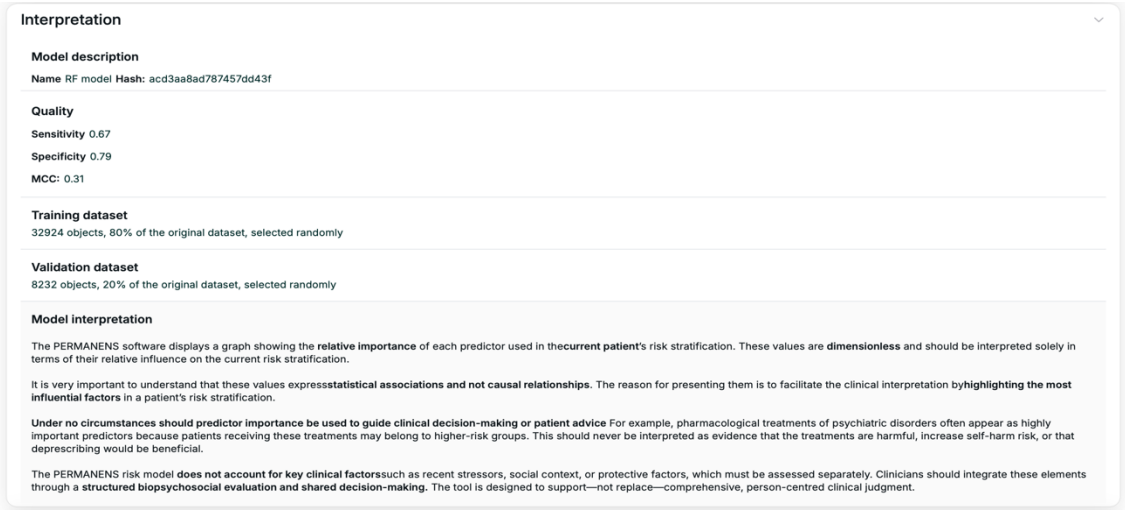
Figure 2. Predictor Importance

d. Interpretation Section

- The section labelled “Interpretation” was confusing to many participants. While sensitivity, specificity, and MCC scores vary by patient, the accompanying text remains the same across all cases. This caused some to perceive it as a generic legal disclaimer rather than meaningful patient-specific information (Figure 3).

- Clinicians indicated that the current format may not be easily understood. Plain-language explanations of key metrics would improve usability. Rewriting the content in clear, non-technical language, directly linking the metrics to their clinical relevance would be suggested.

Figure 3. Interpretation



TREATMENT MODULES

- Participants recommended including a dedicated section for collateral or contextual information relevant to the patient’s situation. This section should provide critical guidance on support resources, including relevant organizations and peer support communities, and ideally map out the closest available groups to the patient to facilitate access to care and support.

- Participants also appreciated the tool for providing evidence-based guidance, although it is acknowledged that with certain patients—particularly those seen frequently—it may introduce some bias or interfere with decision-making.

- All members observed that the modules are clear and concise in their current form. Further, they highlighted the need for non-stigmatizing, trauma-informed

language and guidance that medical professionals can confidently apply in real-world clinical scenarios.

- Overall, participants across all UAGs preferred that safety planning and the BPSA serve as the primary components, as these are the most feasible interventions to implement within the emergency department (ED) setting. Other recommendations could be placed in less prominent sections to reflect their lower practicality in this context. To ensure usefulness in the ED, the guidance on both safety planning and the BPSA should be more concise and focused.

- The prompts, especially those related to creating safety plans, were highly valued. These prompts will help clinicians, including those in early stages of training or working in emergency departments, to think critically and ensure that no key steps are missed.