Enhancing an **AI-Powered Clinical Decision Support Tool** for User-Centered Wound Care: A One Year Follow-up

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INTRODUCTION

The integration of artificial intelligence (AI) into clinical decision-making revolutionizes wound care by providing clinicians with rapid access to evidence-based information[1,2]. However, the initial AI deployment on our platform revealed usability challenges[3].

This secondary study aimed to refine the use of responsible AI to enhance user experience while continuing to reduce the risk of AI hallucinations, and ultimately empower wound care clinicians to find evidence-based, reliable answers more quickly.

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SCAN ME

METHOD

Using the **Design Thinking methodology** , the solution was developed as a module within a decision support platform with evidence-based knowledge base that is continually updated.

Four wound care clinicians were interviewed and observed interacting with the AI interface in real time to identify both intuitive areas and challenging areas of the tool.

Feedback was incorporated into multiple iterations of the interface to optimize user experience.

RESULTS

BEFORE

- The initial AI model had a predefined set of question/prompts through a dropdown menu.
- Clinicians found this interface restrictive, often struggling to find relevant specific information.
- There was a need for usability improvements, especially when custom searches yielded no results, and expressed a preference for a free-text input option to enable more precise queries, essential for complex wound care scenarios.

AFTER

- To address these concerns, the interface was redesigned, grouping the predefined questions/prompts into categories.
- A **new search bar** was introduced to handle unexpected queries not covered by the existing prompts.
- **AI-enhanced free-text searches** can now be performed to retrieve answers exclusively from a trusted, editor-vetted knowledge base, **ensuring all responses are based on reliable, evidence-based information.**

Clinicians reported satisfaction with the improvements and felt that their feedback had been valued.

CONCLUSIONS

The enhancements to the AI-powered clinical intelligence solution for wound care successfully addressed user feedback, resulting in an interface that is:

✓ **More intuitive**
✓ **Responsive**
✓ **Reliable**

These updates improved the tool's usability, making it better suited to support clinicians' needs in complex wound care scenarios.

The **role of responsible AI** in shaping the future of clinical decision-making is underscored by these improvements, providing safer and more effective support for healthcare professionals.

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Wound Reference, Inc., San Francisco CA