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REVIEWER'S REPORT

Manuscript No.: IJAR-57855

Title: Explainable AI for Therapeutic Decision-Making and Prescription Safety: A Longitudinal Framework for Clinical Decision Support.

Recommendation:

Accept as it is

Accept after minor revision Yes

Accept after major revision

Do not accept (*Reasons below*).....

Rating	Excel.	Good	Fair	Poor
Originality		yes		
Techn. Quality		yes		
Clarity		yes		
Significance		yes		

Reviewer's Name – Dr. Bharti Bisht

Detailed Reviewer's Report

The manuscript, “Explainable AI for Therapeutic Decision-Making and Prescription Safety: A Longitudinal Framework for Clinical Decision Support,” addresses an important and emerging gap in clinical artificial intelligence by shifting the focus from diagnostic accuracy to therapeutic decision-making and prescription safety. The paper is well-motivated, clearly arguing that clinical interventions involve a longitudinal chain of actions—including drug selection, dosing, monitoring, reassessment, and treatment modification—that are not adequately captured by conventional AI evaluation frameworks. The narrative review draws from a broad range of reputable DOI-indexed sources and effectively synthesizes evidence regarding AI-assisted prescribing, clinician–AI collaboration, explainable AI, and large language model–based clinical agents. The proposed Longitudinal Therapeutic XAI Framework is conceptually valuable and aligns with current demands for transparency, reproducibility, and workflow-oriented evaluation in healthcare AI. The emphasis on prescription safety as a primary endpoint is particularly relevant and offers a practical perspective for future clinical decision-support systems. However, the manuscript would benefit from a more detailed description of the literature selection process, clearer inclusion and exclusion criteria, and a stronger methodological justification for the narrative review approach. Additionally, incorporating illustrative clinical use cases, comparative analysis with existing XAI frameworks, and discussion of implementation challenges in real-world healthcare settings would strengthen the practical applicability of the proposed framework. Overall, the article presents a timely, original, and clinically significant contribution that advances the discussion of explainability from decision justification toward actionable patient safety and therapeutic stewardship.