

From Triage to Discharge

A Survey of NLP Tasks, Methods, and Open Challenges in the Emergency Department (ED)

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Funded by:

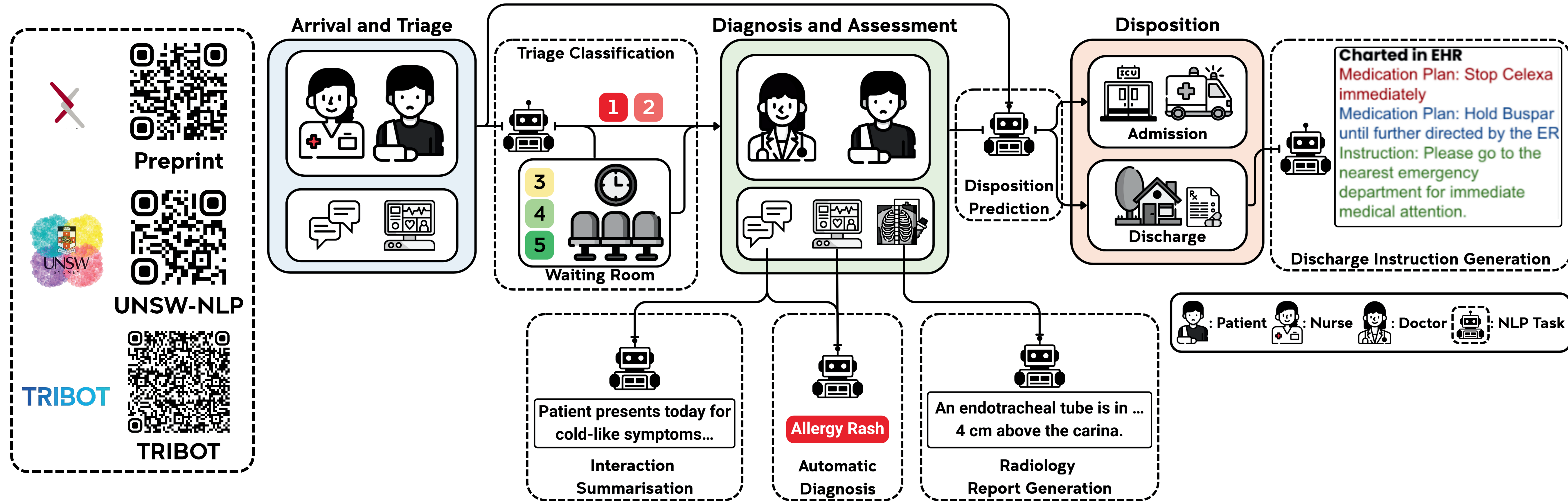


Australian Government

National Health and
Medical Research Council

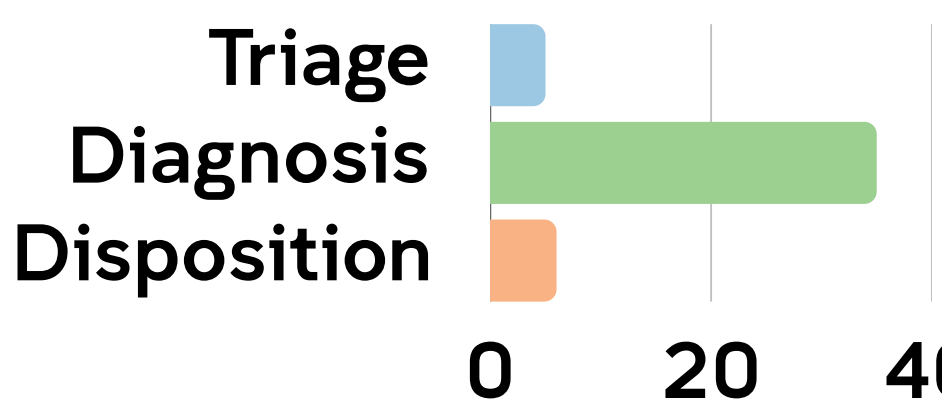
ED-NLP: Mostly diagnosis, tested-offline, deployed nowhere

NLP Tasks Across ED Phases

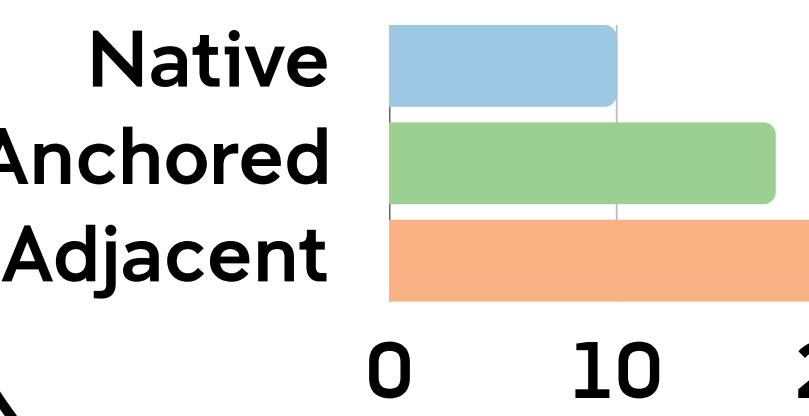


Clinical Settings

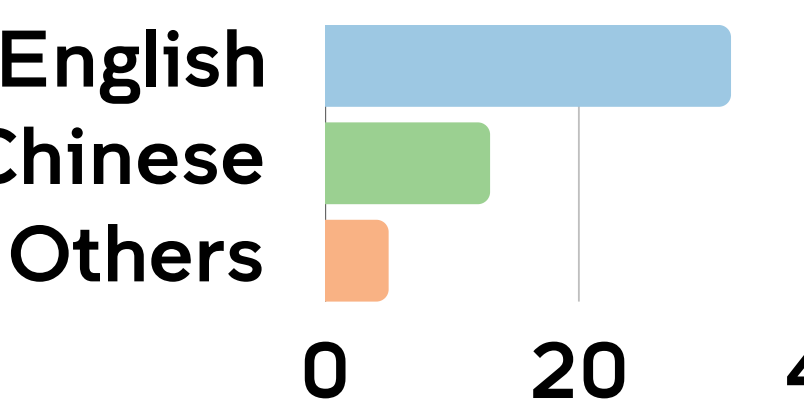
Diagnosis dominates



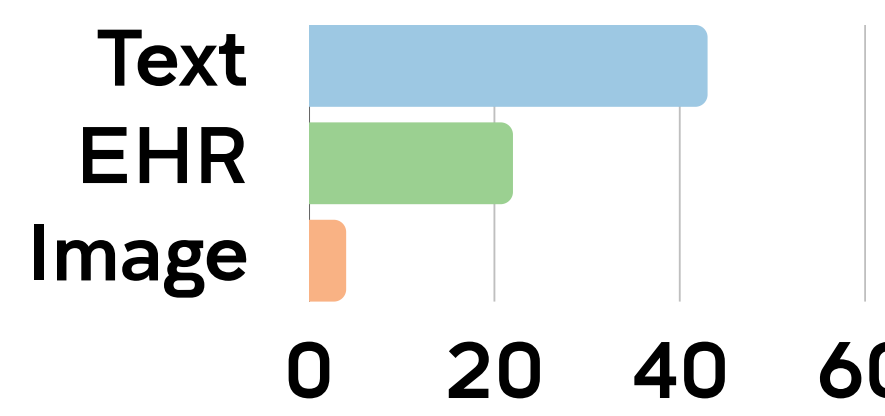
Little ED-nativity*



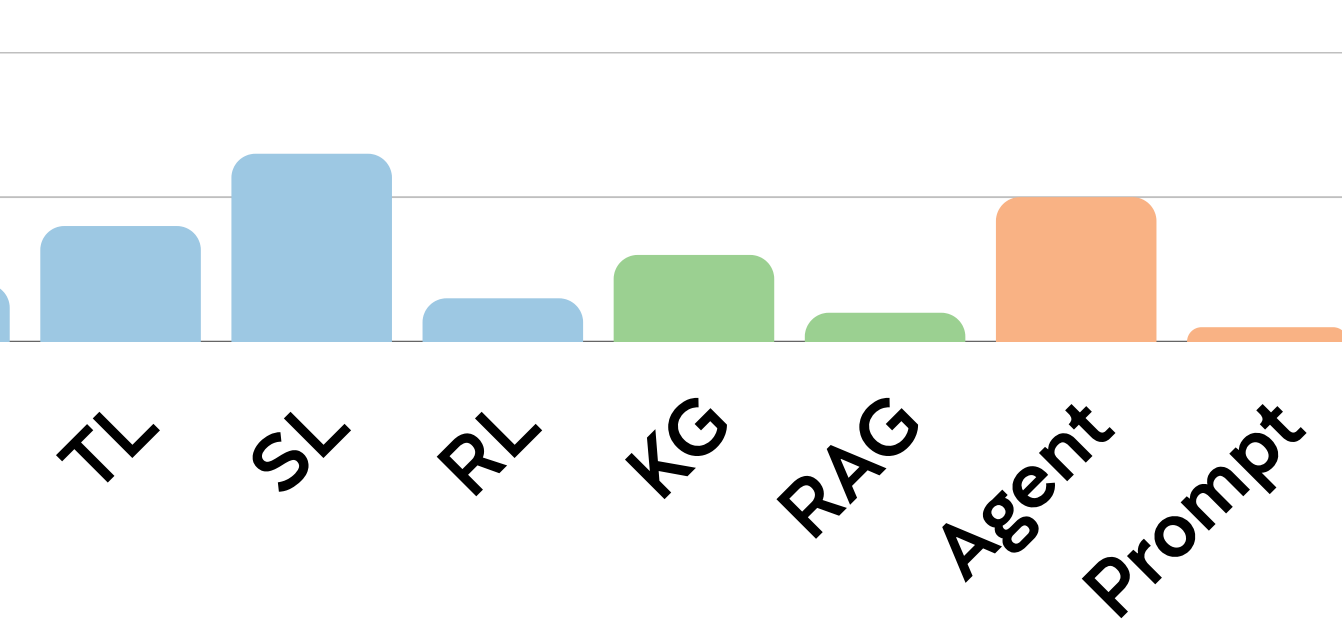
Limited languages



Some multimodality



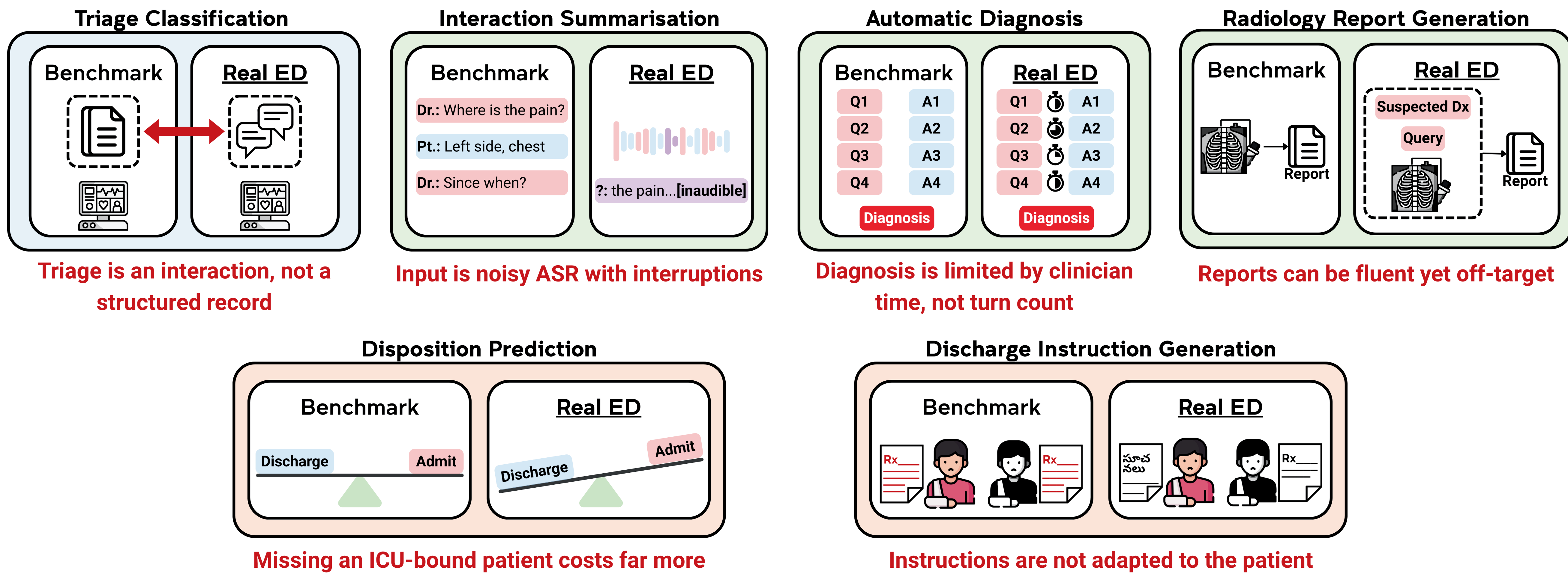
No dominant strategy



- **Native** = ED data + ED task
- **Anchored** = non-ED data + ED-relevant task
- **Adjacent** = non-ED data + ED-transferable task

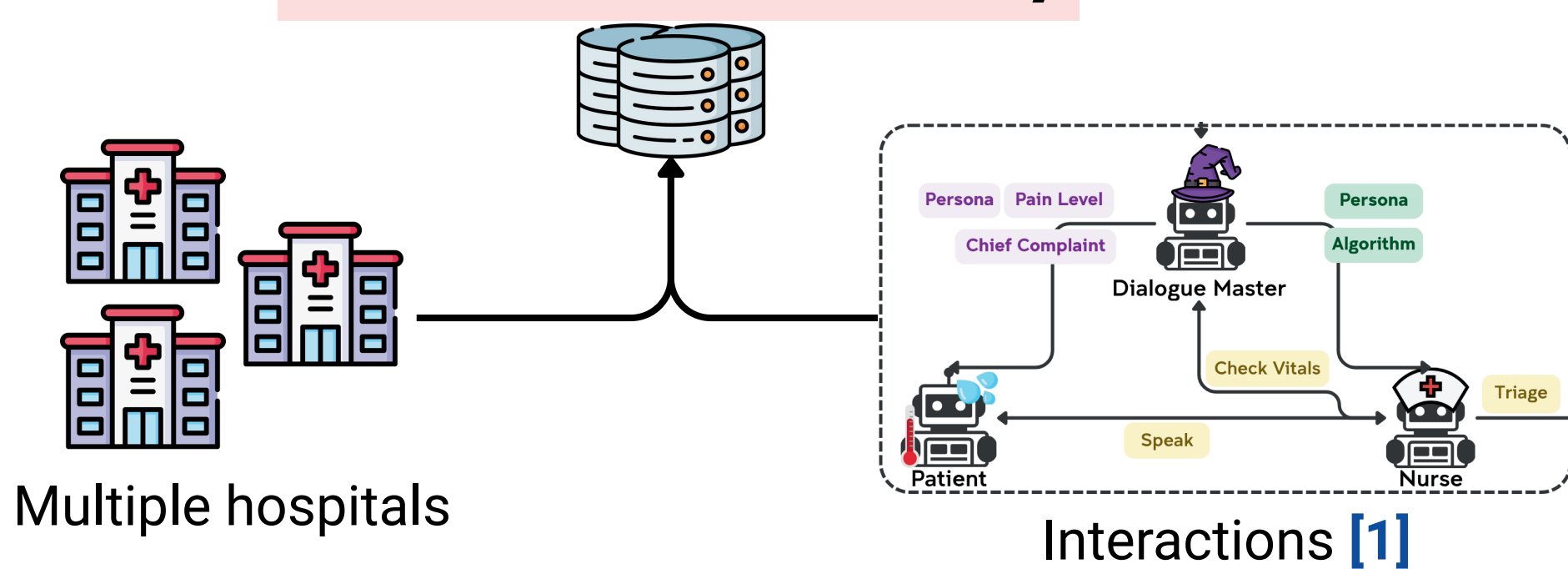
PT = Pre-trained; TL = Transfer Learning; SL = Supervised Learning; RL = Reinforcement Learning; KG = Knowledge-Grounded; RAG = Retrieval-Augmented Generation

Challenges

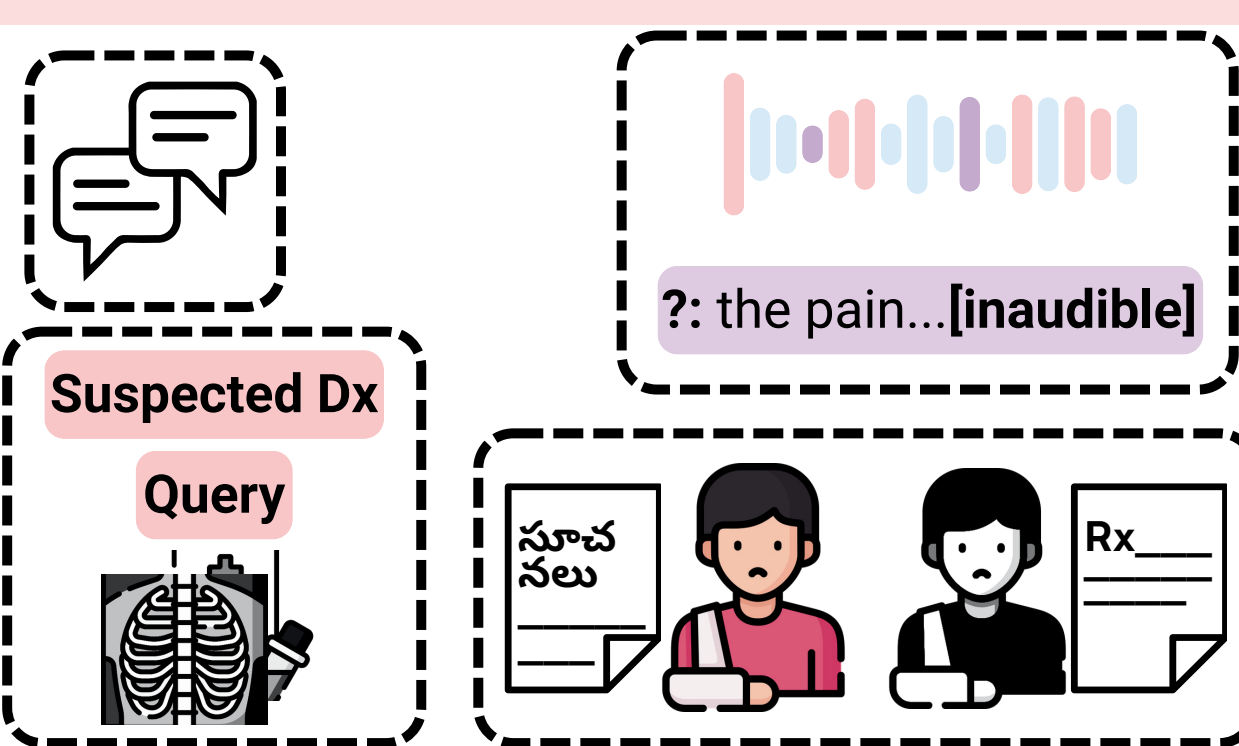


Opportunities

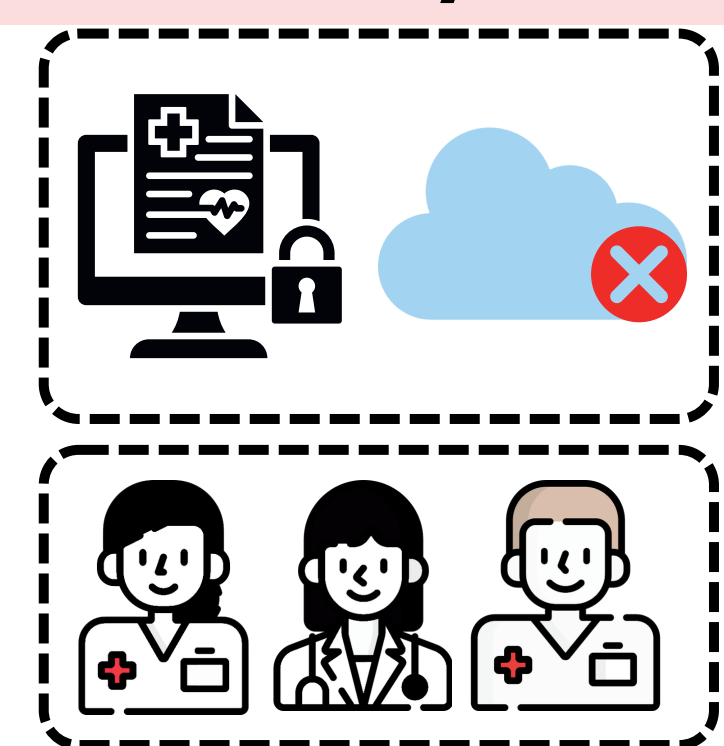
Data Generalisability



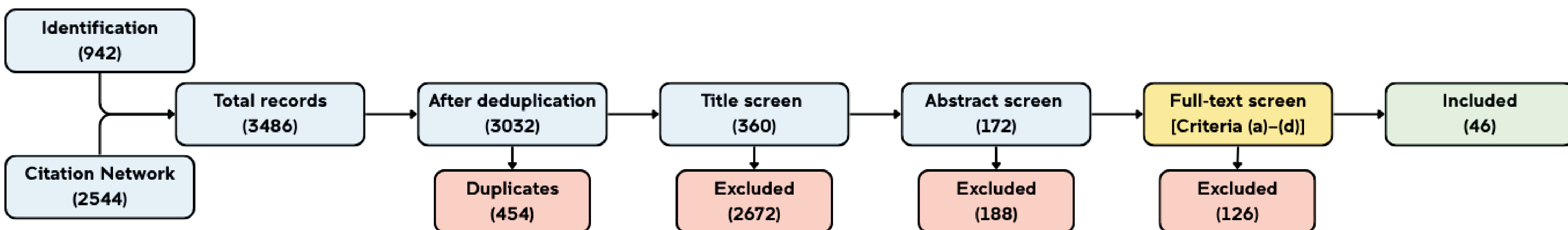
Robustness to real-world data



Deployment, Privacy and Integration



Search Methodology



References

[1] Dipankar Srirag et al. (2026) TriageSim: A Conversational Emergency Triage Simulation Framework from Structured Electronic Health Records. Proc. Interspeech 2026.



Thanks A Bunch!