

Creating a Framework for Large Language Models for Caregiver Support in Dementia



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MassAITC AD/ADRD Focus Pilot Core

Project Overview Background Caregiver fatigue and burnout is a major Ranking of Caregiver Support via LLM or GCM (N=26) driver of burden of care in dementia and resources to support caregivers are scarce. Question Set Posed to Increasing ubiquity of LLMs means that it Baseline Focus Group Data Analysis and Survey to is reasonable to anticipate that caregivers Question Set Posed to to Generate 100 Generation of Compare Questions Re: **Best Practice** GCM Responses by Each will increasingly turn to these tools for a Caregiving Guidelines Group range of solutions when Geriatric Care Question Set Posed to Managers are not accessible. GCM aided by LLM We aim to identify specific domains of Modified Delphi Ethical Framework care management that may be best (N=5-10) served by AI versus GCMs and develop an Stakeholders 60-Minute 60-Minute Focus ethical framework for meaningful Questionnaire Data Analysis Focus Group and Study Group #2 and interaction between caregivers and LLMs. Team Meet Questionnaire #1 and and Ranking to Identify Development of Questionnaire -Importance of Ethics Summary and Salient #1: Categorized Ethical **Exploration of** Re-Evaluation of Framework Objectives **Ethical Issues** Ranked Results **Ethical Issues** Concerns M Gather clinician feedback on utility of Rippl chatbot for clinical use (Aim 1) 1:1 Interviews on Informed Consent (N=10-15)Recruit 25 caregivers for participation (Aim 2) ☐ Organize and conduct 5 focus groups to create 45-Minute Structured 1:1 Qualitative Analysis and Bioethics Interviews on list of 100 common caregiver questions (Aim 2) Development of Best Informed Consent Submit 100 questions to GCM and Rippl chatbot Practices and LLM Use for response and compile results (Aim 2) ☐ Distribute survey to caregivers to rank

Focus Group Brainstorm to Develop Common Caregiver Questions

Over the course of 6 Baseline Focus Groups, we have accumulated over 100 caregiver questions across 3 main domains:

Factual:

- What tracking devices can I use to protect my loved one?
- Where can I find caregiver support groups in my area?
- When should I consider palliative care?

Problem Solving:

- What tasks can I have my loved one help me with so they feel productive?
- How do I get my care recipient to take their medication?
- How do I facilitate trust with my care recipient?

Emotional Support:

- How do I set boundaries as a caregiver?
- Is it ok to lie to my loved one?
- My young children are frightened by my mother's sundowning symptoms.

Clinician Feedback

3 clinicians (clinical psychologist, LICSW, and psychiatry resident) explored the Rippl chatbot for 1 hour and provided their feedback.

"I was genuinely surprised by its performance. The AI provided answers that were not only informative and thoughtful but also incredibly practical."

"[The LLM] could be more specific when offering information on local resources."

"The information provided is accurate and broad, while also emphasizing the importance of flexibility and individual needs."

Next Steps

Conduct rank ordering of 100 question responses, the modified Delphi protocol, and final analysis of results

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consent (Aim 3)

☐ Implement modified Delphi process with caregivers and academic stakeholders (Aim 3)

preferences between GCM, chatbot, and

☑ Conduct 10-15 one-on-one interviews with

combined GCM-chatbot approach (Aim 2)

caregivers to explore conversations on informed

☐ Analyze and synthesize results (Aims 1-3)