Research Plan for CAREHAVEN

Problem Statement

How might we improve the quality of care and support for elderly individuals, disabled people, and children with special needs by leveraging AI to enhance caregiving experiences and address stigmatization, medication mismanagement, and caregiver training gaps?

Summary

Caregiving companies in the US, UK, and Canada often face significant challenges in delivering consistent, high-quality care due to staff shortages, inadequate training, and the complexity of catering to the unique needs of elderly individuals, disabled people, and children with special needs. Stigmatization, medication mismanagement, and the absence of tailored support are persistent issues affecting these groups, leading to isolation, reduced quality of life, and potential harm.

An AI-driven app offers a unique opportunity to solve these problems by enabling real-time medical support, personalized medication management, community-building features, and enhanced caregiver training. This app can revolutionize caregiving experiences by creating a more inclusive, efficient, and supportive ecosystem.

Background

The caregiving industry is under immense pressure to meet the growing demand for quality care while grappling with workforce shortages and limited resources. Many caregiving companies hire underqualified staff due to these shortages, resulting in mismanagement of medication and a lack of proper handling of patients. Furthermore, stigmatization often isolates disabled individuals and children with special needs, worsening their mental and emotional well-being.

While there are apps aimed at elderly or special needs groups, few provide an integrated solution combining personalized care, community building, and caregiver support powered by AI. This app aims to fill this gap by addressing pain points specific to caregiving companies and their clients.

Research Objective

The primary objective of this research is to understand how AI can improve caregiving experiences and reduce stigmatization for elderly individuals, disabled people, and children with special needs. By identifying key pain points of caregiving companies and their clients, the research will uncover how AI-driven solutions can enhance medication management, provide real-time support, build inclusive communities, and improve caregiver training.

Customer Segment

- Caregiving companies in the US, UK, and Canada

- Elderly individuals requiring support
- Disabled individuals
- Children with special needs
- Caregivers and family members involved in caregiving

Research Methods/Process

1. **User Interviews:**
    - Conduct interviews with 5 caregivers from caregiving companies to understand their challenges and needs.
    - Interview 2 elderly individuals, 2 disabled people, and 2 parents of special needs children to gain insights into their daily struggles and preferences.
2. **Competitor Analysis**
   Currently, caregiving companies often rely on multiple applications to meet the diverse needs of their clients, as there is a lack of a unified platform that caters comprehensively to elderly individuals, disabled people, and children with special needs. This fragmentation can lead to inefficiencies and inconsistencies in care delivery.

   Some Existing Applications
   BoundaryCare: An app designed for the Apple Watch, BoundaryCare focuses on enhancing the independence, safety, and well-being of vulnerable individuals, particularly those with disabilities. It offers features like location tracking and health monitoring.

   CircleOf: This app provides support for family caregivers by offering tools for organization, communication, and coordination of care tasks. It aims to reduce stress and streamline caregiving responsibilities.

   While these applications offer valuable features, they often focus on specific aspects of caregiving or target particular user groups. There is a significant opportunity to develop an integrated AI-driven platform that addresses the comprehensive needs of caregiving companies.

   Supporting Evidence of Industry Challenges:
   The need for improved caregiving solutions is underscored by incidents of medication mismanagement leading to severe consequences. For example:

   In Pennsylvania, a caretaker was charged with involuntary manslaughter after failing to renew a patient's prescription, resulting in the patient's death from a seizure. Caretaker Charged with Involuntary Manslaughter, Neglect for Failure to Renew Patient's Medications which Led to Fatal Seizure Episode – PA Office of Attorney General
   A former nurse in Tennessee was found guilty of homicide due to a medication error that led to a patient's death. Former nurse guilty of homicide in medication error death | AP News

   These cases highlight the critical importance of accurate medication management and the potential role of AI-driven solutions in preventing such tragedies.

Research Questions

- What are the biggest challenges caregivers face in managing medication for elderly, disabled, and special needs individuals?
- How do caregiving companies currently train their staff, and what are the gaps in their training programs?
- How does stigmatization affect the mental well-being of disabled individuals and children with special needs?
- What features would users find most valuable in an AI-driven app for caregiving?
- How can AI facilitate community building and reduce feelings of isolation among these groups?
- What are the common emergencies caregivers face, and how can real-time AI support help resolve them?
- How can AI improve the accuracy and efficiency of medication reminders and inventory management?
- How do users perceive current caregiving apps, and what improvements do they wish to see?

AI-Driven Features

1. **Real-Time AI Chatbot**: Provides instant, medically-informed advice during emergencies or for routine care questions, ensuring caregivers get expert guidance without delays.
2. **Automated Medication Management**: Tracks prescriptions, schedules reminders, and alerts caregivers when medication supplies are running low, using a database of medications tailored to specific conditions.
3. **Community Building and Activities**: Recommends fun, location-based activities and connects users with others in similar situations to foster inclusivity and reduce stigmatization.
4. **AI-Driven Caregiver Training**: Provides personalized, interactive training modules for caregivers, helping them improve their skills and handle patients effectively.
5. **Holistic Food Recommendations**: Suggests balanced meal plans based on health conditions and flags potential allergens for children with special needs.
6. **Health Monitoring**: Tracks health metrics and provides caregivers with actionable insights to optimize care.

Conclusion

This research will uncover valuable insights into the challenges faced by caregiving companies and their clients, paving the way for an AI-driven app that revolutionizes caregiving experiences. By leveraging AI

to address critical pain points like medication mismanagement, stigmatization, and caregiver training gaps, the app will create a more inclusive, efficient, and supportive environment for all stakeholders.