

Market Research Document

Product Name: ElderTend

Team 5: ProPulse

1. Aishwariya Subakkar
2. Aparna Madhurakavi
3. Bharath Vittal
4. Sanyam Sharma
5. Vishak Vijayakumar

Vision

For elderly individuals and their caregivers who need comprehensive health monitoring and emergency assistance, ElderTend is a health and well-being app that provides continuous care coordination and peace of mind. Unlike other health apps, ElderTend offers integrated location tracking, vital sign monitoring, a panic button, and seamless data sharing between elderly users, caregivers, and family members.

Motivation

Customer Segments

Autistic/ differently abled people, and Alzheimer's patients: This category of customers may not be tech-savvy, find it difficult to use smartphones, or have multiple devices to carry. By integrating their needs, ElderTend provides confidence and independence for these individuals, ensuring they can enjoy their independence without fear of social vulnerability.

Family members: According to a study by the Pew Research Center, about 27 percent of American seniors live solo. Living away from parents while maintaining elderly health can be challenging, requiring monitoring of medication, blood sugar, blood pressure, and mental health, a common concern in modern times. Forbes reports that 1 out of 36 children are autistic. ElderTend can assist working parents in monitoring their children's wandering by tracking mental, physical, and location aspects, reducing the burden on the accountable party.

Caregivers/ old age home staff: According to a placeformom and Centers for Disease Control and

Prevention, over 1.3 million senior citizens reside in nursing facilities across the US, with the number expected to rise as the population ages and 10.4% of caregivers provide care to dementia or cognitive impairment patients. ElderTend helps caregivers become supervisors for elderly or disabled individuals living far from home, allowing them to maintain independence and provide real-time information to their families. This helps families maintain trust and stay in touch with their parents, reducing the burden on caregivers.

User Persona

Old man Stephan

Stephan Clearwaters is an 80 year old man. He has the beginning stages of Alzheimer's. Though he has made sure that his family and his financial future is safe, he worries about his own safety and his health. He keeps worrying about him forgetting his way home, his medications, his daily life and fears that he will be too dependent on his family once he gets worse. He doesn't want to burden his family. But at the same time his son and daughter are worried about him being distant too. He wishes there is some way he could have his worries satisfied.

Responsible working professional Rita

Rita Morgan is a 42-year-old pre-sales professional who requires 80% travel. She has her parents living with her but is very concerned about her mother, who lacks confidence and worries about her general health. Her mother cannot walk well due to an irreparable knee injury. However, to keep her active, she needs to go on walks or be active. What if something happens to her? What if she falls when Rita is away? These questions haunt her occasionally. Rita keeps calling her mom whenever necessary. She does have a caregiver, but she needs to keep asking for updates, which seems like a separate task itself. She feels she might as well call her mother instead to check. She wishes to have a platform to keep track of her mom's health and emergency situations.

Caregiver Catherine and Paula

Catherina and Paula are caregivers at an elderly home. At times, they oversee multiple elders, occasionally sharing responsibilities for the same individuals during shifts. Since they may clock out at different times, they are worried about miscommunicating or not communicating certain things at all. They wish they had a platform to keep track of the elders' vitals and be transparent in terms of data. Since they handle so many elders at the same time, they find it extremely hard to remember all the information about everyone. They wish to have a common platform for tracking and sharing information, like a dashboard to keep track of various individuals at once, in real-time.

Unmet Needs

Autistic/ differently abled people, and Alzheimer's patients:

We believe that Autistic, differently abled, and Alzheimer's patients experience discrepancies in terms of ease of use, using multiple devices, complex technology arrangements, and being self-conscious while using tracking devices when doing daily activities. They do not have one single device that could give them notifications about medications, panic buttons, tracking feature, fall detection, emergency contact etc., that is simple to use.

Family members:

We recognize that family members encounter challenges in obtaining accurate information and facing concerns about their loved ones wandering off or experiencing health issues while under the care of others or when they are away. This is due to the inability to provide constant supervision and the potential discomfort experienced by those with disabilities due to continuous monitoring. We lack a mechanism that enables individuals to monitor their parents' well-being while they are away, without relying on caregivers or third parties. Families may need to invest in unconventional gadgets that are conspicuous or challenging for them to use independently. It is frustrating for families to continually request or conduct basic tests for the'r loved ones' blood pressure, sugar levels, and medication tracking; automation is urgently needed.

Caregivers/ old age home staff:

We believe caregivers encounter difficulties when it comes to tracking information for multiple clients simultaneously. They also face challenges in communicating with other caregivers who may be working different shifts for the same client. These challenges arise due to time and human resource constraints. Caregivers may be occupied with attending to other elders or disabled individuals when another client requires assistance. One pain point caregivers face is the need to manage multiple emergency contacts, which impacts their overall efficiency.

Existing Solutions

Life360 is an application specifically designed for people with Alzheimer's, which helps track senior citizens. It also enables them to create private groups with their caregivers, allowing them to share their live locations. The alert-based system notifies the caregiver when the user arrives at the pre-set location.

Medisafe, available on iOS and Android, streamlines medication management with timely reminders, ensuring adherence. The app includes health measurement tracking and generates comprehensive reports for sharing with caregivers and healthcare providers.

BoundaryCare is an app-based service that supports vulnerable individuals to improve safety and

health by providing comprehensive monitoring and tracking various health parameters.

Medical guardian is a tracking system that consists of a tracking device(separate for in-home in the form of a necklace or a bracelet. It claims to have the longest range of tracking (1300 feet) and has a fall detection feature.

Bay Alarm Medical is a panic button system that can be attached to a watch, keys, locket, watch strap, etc. This device is integrated with AT&T or other mobile services. It comes with a smart watch arrangement as well. This is a standalone medical alert system and doesn't require a cell phone.

Table: Competitive Analysis

Feature/Competitor		Life 360	Medisafe	BoundaryCare	Medical Guardian	Bay Alarm Medical	ElderTend
Upfront price	App only		\$40 per year				TBD
	For Consumers – Kit	\$99, \$199 per year		\$995 per year	\$125	\$159	TBD
	For facilities			\$649 per kit			TBD
Monthly Subscription	App only			\$35	\$39	\$35	TBD
	For Consumers – Kit						TBD
	For facilities			\$68			TBD
Wearable device		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Devices		Own device	App only	Apple Watch	Own device	Own device	Compatible with Smart watches with health tracking features
Location Tracking		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Health Monitoring			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Fall Detection		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Panic Button							<input checked="" type="checkbox"/>
Geofencing				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Medication Reminders			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Emergency Calling	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Health Dashboard			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Behavioral Reminders						
Low Battery Notification			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Medical History		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>

Differentiation

In the existing solutions, there are gaps around emergency response, holistic health monitoring, data sharing between stakeholders, expanded location tracking, accessibility for users, and ease of use. ElderTend can differentiate itself by addressing these limitations and providing an integrated, end-to-end solution. Though they could be very simple solutions, integrating them into any peripheral device is crucial to ensure user-friendly interfaces for enhanced accessibility.

Why Now?

Over the past two decades, the utilization of smartphones, tablets, and, more recently, wearables has expanded significantly. According to Insider Intelligence, the US smart wearable user market is expected to grow by 27.2% year over year in 2025. As we will delve into later, the market for healthcare devices has surged and is projected to continue growing in 2024 and beyond. With both trends converging, the time is ripe to raise awareness of this product.

Use Cases

Elder User

Create Elder Profile

Helen wants to start using ElderTend to monitor her health. She downloads the ElderTend app on her smartphone and taps “Create Profile”. She enters details like name, age, location, medical conditions, emergency contacts and care needs. She selects basic features like medication reminders and health dashboards. Helen saves the profile.

Request Family Connection

Helen opens the ElderTend app and navigates to the Connect tab. She selects her daughter Sarah from the list and taps “Send Request”. Sarah receives a notification asking her to connect with Helen on ElderTend. Sarah accepts the request, allowing shared access to Helen’s health data.

View Health Dashboard

Helen wants to check her blood pressure trends. She opens the ElderTend app and goes to the Dashboard page. She can view graphs and trends of her blood pressure over time. She can also view other health data like weight, glucose levels, appointment reminders etc. in one place.

Trigger Emergency Response

Helen is gardening and suddenly feels sharp chest pains. She presses the Emergency button on her ElderTend smartwatch. This immediately shares her location and health data with emergency services and also sends an alert to Sarah. Emergency personnel are dispatched to Helen using the location shared.

Family Members

Monitor Elder Health

Sarah is at work when she receives an alert that Helen's blood sugar level is very high today. She opens the ElderTend app and checks the Dashboard, where she can view all of Helen's real-time health data. She calls Helen to check in.

Schedule Caregiver Visits

Sarah needs someone to look after Helen when she is traveling for work. In the ElderTend app, Sarah schedules recurring caregiver visits for Helen on the calendar. She can view confirmed visits and track when the caregiver checks in/out.

Set Location Alerts

Sarah sets a geo-fence around Helen's home location. She will be alerted by the ElderTend app if Helen leaves the set area. Sarah can also check Helen's current location at any time on the app's map.

View Medical History

Helen permits Sarah to view her medical history. Sarah opens the ElderTend app and goes to Helen's profile. She can view Helen's medical conditions, records, prescriptions etc. to better understand her health needs.

Market Size

The core market for ElderTend is focused on elderly people, people diagnosed with special needs like Alzheimer's, Dementia, Autism who are our primary users and their family members and caregivers are our secondary users of the product. The scope of our estimates is for our target market, the USA.

Primary Users (Elderly, People with Special Needs)

In the US, 16% of the population is aged 65 and older. The home care market is projected to reach \$225 billion by 2024, reflecting the growing need for elder care. 7% of seniors require personal assistance, with women more likely to need help. Additionally, 7 out of 10 individuals over 65 will need long-term care. The US has invested \$35 billion in health information technology to improve telemedicine accessibility, but only 45% of seniors use broadband services and only 6% use transportation apps. GPS technology can aid 60% of Alzheimer's patients and manage multiple prescriptions. Furthermore, seniors managing multiple prescriptions can benefit from technological advancements.

1 out of 36 children in the US have Autism. Considering out of 72.5 million children, in the United States, 2.01 million children have Autism.

Totally, there are 3M apple watch users out of which 2.5M are senior citizens.

Secondary Users (Family members and caregivers)

There are over 67,000 to 77,000 assisted living facilities, nursing homes and senior living units. The direct care workforce totals 4.8 million, encompassing 2.8 million home care workers, 718,500 in residential care, 448,000 nursing assistants in nursing homes, and 1 million in other settings.

Key Findings

From the current US population of 331.9M we have considered the following target market.

Senior citizens (above age 65)	54.56M
People with special needs	42M
People diagnosed with Alzheimer's	6.7M
Children diagnosed with Autism	2.01M
Total potential users	105.27M

- **Assuming an adoption rate of 10%** for ElderTend, the number of primary users is 10M with each user having one or more secondary users making the **total number of users to at least 20M**.

- Average family caregivers spend **\$1230 approximately per year** on just medical costs for elderly or special needs indicating that **expenses are high, and the market exists for a solution.**
- A substantial **2.5 million** senior citizens have already integrated Apple Watches into their daily routines. **Leveraging this existing user** base presents an opportunity for **easy adoption.**
- Medicare could cover the costs and subscription of healthcare products like ElderTend suggesting **expenses can be covered resulting in higher adoption rates.**
- Our secondary user segment is considerably large considering the existence of approx. 70,000 caregiving facilities. Caregiving staff along with family members factored in suggest the **secondary user base is projected to increase significantly.**

Caveats / Risks / Key Dependencies

- **Regulatory Compliance:** Medical applications are subject to strict regulations, especially concerning data privacy and security. Developers must ensure compliance with regulations such as HIPAA (Health Insurance Portability and Accountability Act) in the United States and GDPR (General Data Protection Regulation) in the European Union.
- **Accuracy and Reliability:** The app must provide accurate and reliable information to users, especially when providing diagnostics and metrics. Ensuring the accuracy of data collected and algorithms used for analysis is crucial to avoid misinformation or potential harm to users.
- **User Safety:** Since medical applications may involve monitoring vital signs or providing health-related advice, ensuring user safety is paramount. Considerations need to be taken of potential risks associated with inaccurate readings and implement safeguards to minimize these risks.
- **Data Security:** Medical data is highly sensitive and subject to strict privacy regulations. Robust security measures shall be implemented to protect users' health information from unauthorized access, data breaches, and other security threats. Protection from eavesdropping and other attacks are a concern. All customer segments would pose concerns about who has access to their data, location and other parameters.
- **Device Limitations:** Smartwatches have limitations in terms of hardware capabilities and sensor accuracy compared to medical-grade devices. These limitations need to be considered when designing the application to ensure that it provides reliable results within the constraints of the device.
- **User Acceptance and Trust:** Users must trust the accuracy and reliability of medical applications to adopt them for monitoring their health. Building trust requires transparent communication about how the application works, the limitations of its capabilities, and the steps taken to ensure data privacy and security.
- **Legal Liability:** Legal liability may be faced if the application provides inaccurate information

or advice that leads to harm or injury to users. It's essential to consult legal experts to understand liability risks and take appropriate measures to mitigate them.

- **Integration with Healthcare Systems:** For medical applications intended for clinical use, integration with existing healthcare systems may be necessary. Considerations for interoperability standards and regulations to ensure seamless integration with electronic health records (EHR) and other healthcare IT systems need to be ensured.
- **Availability of required 3rd-party complements:** As we are relying on the smartwatch as our choice of wearable peripheral device, we rely heavily on the hardware (like sensors) and software of the watch, and integration of the watch with the ElderTend platform. If there are major changes to the smartwatch application, then we will have to make corresponding updates to ElderTend. Compatibility with updated software could pose a risk.
- **Key Dependencies:** There will be dependencies with the internal systems of caregiving facilities and with the smartwatch hardware and application.

		SEVERITY		
		1	2	3
LIKELIHOOD	1	LOW Project Plan cancelled early - 1 -	LOW Change in product scope - 2 -	MEDIUM Integration issues with smartwatch - 3 -
	2	LOW Scope creep - 2 -	MEDIUM Regulatory issues - 4 -	HIGH Cost overruns and insufficient funding - 6 -
	3	MEDIUM Software development delays - 3 -	HIGH User acceptance and trust- Target customers prefer personal care - 6 -	HIGH - 9 -

Risk Matrix

Strategic Considerations

The goal of our organization is to streamline and smoothen the process for people who require constant support from their families or an individual, by providing solutions that assist them with their daily medical needs. ElderTend completely aligns with the organization's goal, offering a platform that supports users from multiple medical standpoints.

Although BoundaryCare comes close to offering a similar platform, there are certain aspects where it falls short. We are unsure why it fails to cover these aspects. Firstly, BoundaryCare only offers its service on iOS devices, drastically reducing its potential user base and excluding Android users who may also desperately need the service. This limitation makes it difficult for users to switch platforms. Secondly, BoundaryCare lacks features such as geofencing and an emergency button on their peripheral device, despite the potential for these features to be supported by their platform. We understand the difficulties caretakers face when they cannot locate their patients/members when left unattended, which is why we prioritize these features. Thirdly, important features like behavioral reminders and the patient's medical history are also absent from the application, features which we consider essential and are well-integrated into ElderTend's services.

Another competitor that closely resembles us is Medisafe, which offers services such as health monitoring, fall detection, medication reminders, and medical history. However, this platform does not address all the issues users might face and fails to provide compatibility with peripheral devices. This lack of compatibility affects the platform's ability to support geofencing, location tracking, and emergency alerts. Additionally, Medisafe does not offer a health dashboard or behavioral reminders like ElderTend does.

Overall, we believe ElderTend provides a holistic solution that can be used by both individual attendants and organizations catering to multiple patients. It covers a wide range of functionalities, reducing the workload for caretakers and improving their quality of life.

Team Members

No.	Name	Responsibility
1.	Aishwariya Subakkar	Operations
2.	Aparna Madhurakavi	Graphic Design
3.	Bharath Vittal	Market Research and Marketing Strategy
4.	Sanyam Sharma	Product Strategy, UX Design
5.	Vishak Vijayakumar	Development and Testing

Go/No Go Recommendation

After thoroughly analyzing all the provided information and the data gathered from interviews and surveys, our team strongly advocates moving forward. It's evident that there is a significant unmet need for this service, and the market size aligns well with our proposed plan.

References:

1. <https://www.medicalalertbuyersguide.org/articles/5-health-apps-for-seniors/>
2. <https://www.nytimes.com/2023/11/02/realestate/more-american-seniors-live-alone.html>
3. <https://www.forbes.com/sites/jenniferpalumbo/2023/03/23/cdc-estimate-on-autism-prevalence-increases-to-1-in-36-children-in-us/?sh=6187c9e16e7e>
4. <https://www.aplaceformom.com/senior-living-data/articles/elderly-nursing-home-population>
5. <https://www.insiderintelligence.com/insights/wearable-technology-healthcare-medical-devices/>
6. <https://www.aplaceformom.com/caregiver-resources/articles/assisted-living-vs-nursing-homes>
7. <https://elderprotectioncenter.com/nursing-home-vs-assisted-living/>
8. <https://www.ahcancal.org/Assisted-Living/Facts-and-Figures/Pages/default.aspx>
9. <https://data.census.gov/>
10. <https://www.parxhhc.com/resources/medicare-home-health-care-services>
11. <https://www.phinational.org/policy-research/key-facts-faq/>
12. <https://www.healthwellfoundation.org/realworldhealthcare/what-is-the-cost-of-caregiving/>
13. <https://www.autismparentingmagazine.com/autism-statistics/>
14. <https://www.myshortlister.com/insights/senior-care-statistics>

Appendix

Customer interview questions

Buyers Segment: Senior Citizens, Seniors with medical conditions and their family

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Sellers Segment: Institutions that support and care for elderly

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients? (Individual caretaker/Caregiving facility)

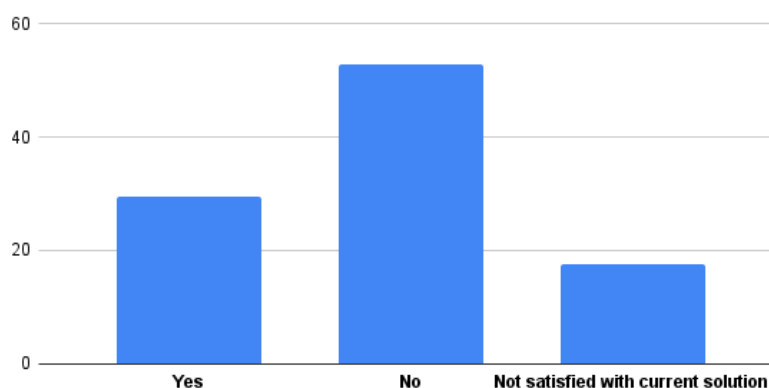
Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? (Hospitals)

Question 3: Is there any tool/technology that you use to monitor the well-being of their members? (Retirement homes and Support groups)

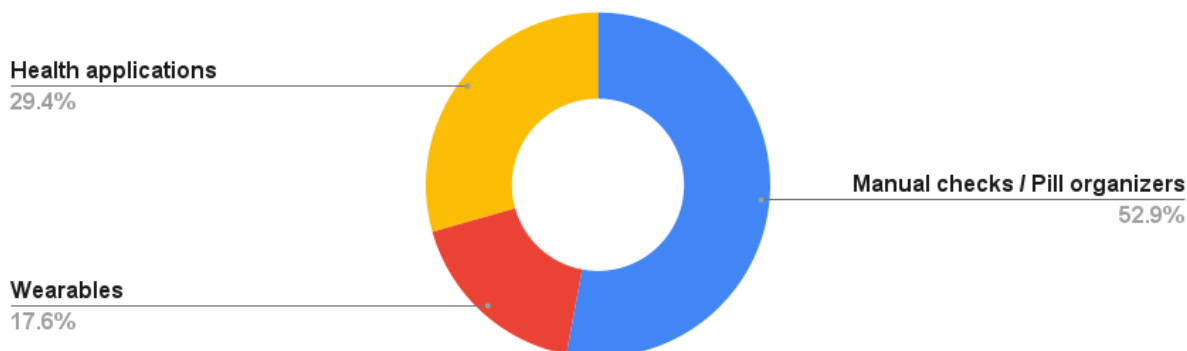
USER SURVEY ANALYSIS (Elderly/Family Member)	
How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?	<ul style="list-style-type: none"> • Work-around implemented: • Usage of a GPS • Home alerting system • Reliance on neighbors/relatives • Use of caregivers • Regular phone calls • Call the doctors or pharmacies for consultation.
In what ways do you require assistance with daily activities?	<ul style="list-style-type: none"> • Medicine Tracking • Regular Health Updates • Emergency Updates • Updates from Caregivers
What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?	<ul style="list-style-type: none"> • Safety of the elder • Reliability of the caregiver • Absence of real-time data or tracking • Reluctance to use obvious wearables

- Help with outdoor chores (buying medicines or doctor visits)
- Repetitive questioning can annoy the elders

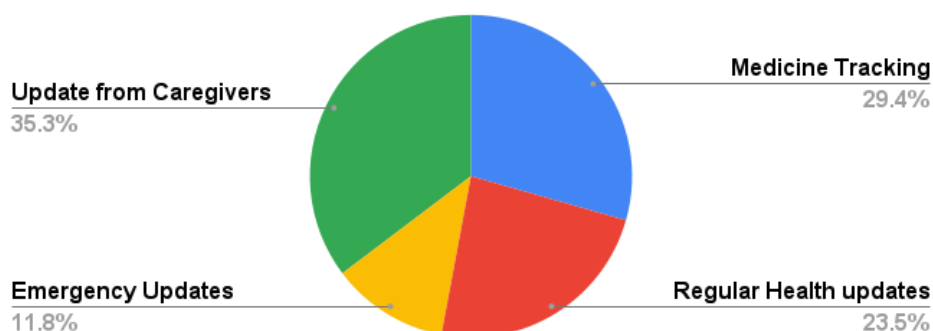
Do families use any technological solution for their parent's health monitoring?



How do families currently monitor their elder's health?



Based on our interviews, we find that around 50% of the families interviewed do not use any solution and manually check their parents' health using machines and pill boxes. While some use applications and wearable devices, approximately 19% of the families did not find them as efficient. From our interviews, it was found that health applications are used, but wearables or applications are not real-time, and it is a hassle to keep updating them or receive information much later on. Wearables serving the purpose of both tracking and health are not used a lot.

In what ways do you require assistance with daily activities?

The interviews highlight a common need for assistance with daily activities, aiming to enhance the well-being of elderly individuals and ensure the monitoring of their health. Main concerns include medication management, the high cost of personalized care, and trust issues with caregiving facilities, compounded by the inability to monitor loved ones who may be prone to getting lost due to their illness. Many interviewees emphasized the importance of tracking health indicators and medication adherence, expressing a desire for solutions that offer reminders and monitoring capabilities without requiring constant in-home assistance.

What are the problems faced when elderly loved ones are not nearby?

The care of elderly individuals often presents several challenges. Safety is a primary concern, as the elderly may be more susceptible to accidents and injuries. Additionally, ensuring the reliability of caregivers is crucial to providing quality care. Another common issue is the absence of real-time data or tracking, which can make it difficult to monitor the well-being of the elderly. Furthermore, there is often a reluctance to use obvious wearables, which can impede efforts to implement monitoring devices. Outdoor chores such as buying medicines or attending doctor visits can also be a source of difficulty. Finally, the repetitive questioning that some elders engage in can be frustrating for both the elderly and their caregivers.

How are emergency situations handled?

As a work-around, families have come up with solutions like the use of GPS devices to track their location, home alerting systems to ensure their safety, and relying on neighbors or relatives to provide additional support. Caregivers are also utilized to offer assistance with daily tasks and provide companionship. Regular phone calls are made to maintain communication and monitor the well-being of the elderly. Furthermore, caregivers often call doctors or pharmacies for consultations on behalf of the elderly. These workarounds aim to enhance the safety and support provided to the elderly, despite the various challenges that may arise.

USER SURVEY ANALYSIS (Caregiver/Hospital)	
What kind of issues do you run into on a daily basis while monitoring multiple patients?	<ul style="list-style-type: none"> • Scheduling Conflicts • Staff Shortage • Remote monitoring tools • Communication gaps
How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations?	<p>Method</p> <ul style="list-style-type: none"> • Text • Email • Medical record in hospital portals • Physical health record during visits <p>Response Rate</p> <ul style="list-style-type: none"> • Immediate Call • Call after emergency assist • Text Message • Notification
Is there any tool/technology that you use to monitor the well-being of their members?	<ul style="list-style-type: none"> • Emails • Online Portals (Organization Specific) • Phone Calls • Smart Home Sensors • Handwritten Notes • Excel Spreadsheets

What kind of issues are faced daily while monitoring multiple patients?

From our interviews we have found that to monitor the well-being of our members, the caregiving establishments utilize a variety of tools and technologies including email, online portals, phone calls, smart home sensors, Excel spreadsheets, handwritten notes, and peripheral devices.

How do you share your patient's health data?



Our interviews with hospitals and caregiving facilities revealed that the most common ways they currently share patient health data with families are via hospital portals, physical records during visits, and digital records sent by email. Specifically, medical records are most often accessed by families through hospital portals. However, no facilities provide real-time health updates to families, text message updates are also only used by 2 based on the data. Overall, the findings reveal an opportunity for solutions that enable continuous, instant sharing of health information between facilities and families.

How quickly do you update emergency situations?

Notifications

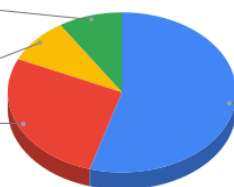
9.1%

Text messages

9.1%

Call family members after providing emergency assist

27.3%



Call Family members immediately
54.5%

Our interviews show most hospitals and care facilities still rely solely on phone calls to notify families during patient emergencies. While an important notification method, the data reveals room to improve by incorporating instant mobile alerts. Only 1 facility uses texts and 1 uses push notifications for emergency updates. This highlights that real-time mobile communication is underutilized, even though it could parallel urgent calls and get critical information to families faster. Overall, the data indicates that hospitals primarily rely on periodic, static methods of sharing health data with families, through portals, physical copies, and email. Very few appear to be leveraging real-time mobile communication tools to keep families updated on their loved one's health status. This highlights an opportunity for solutions that enable continuous, instant data sharing between hospitals and families.

What tool/technology is used to monitor the well-being of their members?

Caregivers face daily challenges such as staff shortage, scheduling conflicts, communication gaps, difficulty in providing specialized care, and the need for remote monitoring tools, particularly in understaffed environments, while managing multiple patients and their medication schedules. There is a need for organization of caregivers taking care of multiple patients and meeting differing challenges of each patient.

Notes from Interviews

Team member #1 name: Aishwariya Subakkar

Interview Notes #1:

Name: Sandhiya. **Age:** 35 **Occupation:** Data Analyst at Tiger Analytics

Concerned About: Elderly parents aged 70

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I monitor their vital signs and medication adherence. I use health tracking apps.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

My parents need help with tasks like medication and mobility, and I'm their main caregiver. Yet, I'm concerned about caregiving facilities lacking personalized and continuous care.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

I worry about their safety and rely on medical alerts and trusted contacts. Yet, the fear persists of not being readily available during emergencies despite precautions.

Interview Notes #2:

Name: Sam **Age:** 27 **Occupation:** AI Engineer
Health conditions: His dad John, has Alzheimer's disease.

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I keep an eye on dad's health by watching how he acts, his mood, and how he's feeling physically. I make sure he doesn't miss any appointments or forget his medications. To help me out, I use

an app to remind him to take his meds and a medical alert system just in case.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Dad requires constant emotional support, especially as he navigates Alzheimer's. I'm his primary care provider, as I'm cautious about the cost and waiting lists of caregiving facilities.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Sam worries about Dad wandering off and getting lost, so he uses a medical alert system with GPS.

Interview Notes #3:

Name: Rachel **Age:** 42 **Occupation:** Graphic Designer

Health conditions: Elderly parents aged 66

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I monitor my parents' health daily, ensuring they take medication on time and eat healthily. I use visual journals, health apps, and wearables for tracking.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

I need help with medical-related tasks such as administering medication and monitoring health indicators. I'm concerned about the inflexible nature of caregiving facilities

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

When my elderly parents are away, I worry about their safety. So, I've installed home monitoring systems and given them wearable emergency alert devices for peace of mind.

Interview Notes #4:

Name: Keerthi **Age:** 35 **Occupation:** Nurse working in a caregiving facility

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients? (Individual caretaker/Caregiving facility)

Daily, I face staff shortages, scheduling conflicts, and communication gaps while caring for multiple patients. It's tough to balance everyone's needs in a busy facility like ours.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? (Hospitals)

We use online portals to share health data with families. In emergencies, we quickly notify families through phone call about their loved one's condition and any necessary actions.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members? (Retirement homes and Support groups)

In our facility, we use electronic health records, wearables for vital signs, and telehealth for remote consultations to monitor residents' well-being comprehensively.

Interview Notes #5:

Name: Karthick **Age:** 42 **Occupation:** Manages a retirement home for individuals with Alzheimer's.

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients? (Individual caretaker/Caregiving facility)

Daily, we grapple with managing Alzheimer's residents' safety and unique needs while overseeing multiple residents with varying levels of assistance required.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? (Hospitals)

We share residents' health updates with families via emails. In emergencies, we prioritize direct

phone calls to promptly inform families about their loved one's condition and any necessary actions.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members? (Retirement homes and Support groups)

In our retirement home, we use smart home sensors for detecting falls or emergencies.

Team member #2 name: Aparna Madhurakavi

Interview Notes #1:

Name: Manjula **Age:** 57 **Occupation:** Homemaker

Place: Religious place

Concerned About: Elderly parents aged 70 and 80 respectively

Health concern: Hunch back and old age related irritation

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I keep track by checking the blood sugar levels and blood pressure using the monitors. And periodic blood work for the other parameters along with doctor visits. I have not explored any solutions.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Assistance is required in the following areas: cleaning, housekeeping, shopping and in general, giving them some company and support. We have so far managed the care ourselves. The elders do not quite trust the caregivers.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Checking on them on a daily basis and addressing any issues immediately is a problem I find tedious. In emergencies, we call the family doctor who then decides the further course of action.

Interview Notes #2:

Name: Jayanthi **Age:** 52 **Occupation:** School Teacher

Concerned about: 3 senior citizens of more than 70 years of age

Place: Neighbourhood Park

Health Concern: Knee impairment and hypothyroid

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I monitor my parents' health using devices like BP and sugar monitors, for their age related problems we give lot of personal support and ask them to play some games and puzzles online also puzzle books. Ask our parents to do gardening using tools and spend time with nature either at home, in the park, temples etc.,

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?
Lack of trusted helpers and man power is the concern. The elderly may or may not feel comfortable with a constant stranger in their house. They might feel the need to be independent like before.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Help with daily activities, household chores and purchase of medicines or visiting doctors when needed. We take help of their neighbors and the helper at home, call them regularly and supply them with medicines, groceries through swiggy and dunzo, arranging an online video call appointments etc.,

Interview Notes #3:

Name: Netanya Elizabeth **Age:** 25

Occupation: Part time caregiver for elderly

Place: Public Library

Health concerns: one with a waist disability and one with a knee disability

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients?

I work part time, that means I can give only 5 hours a day to my work. I can visit my patients only 3 times a week. I find it difficult to track their medication and their health that may flicker. Now that they are pretty old and live alone and have another caregiver working part time, I feel there is scope for communication gaps.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergencies?

In a very polished, non-hurting way we share the patient's data with the family and also with the patient; the ailing shouldn't get agitated or go into depression is the primary concern, then treating the patient will become a bit difficult. We also talk about the treatment process and

the results of the treatment clearly so that the patient can make his mind strong by giving full support financially and personally. But we do this once a week or in emergencies or on demand.

Question 3 : Is there any tool/technology that you use to monitor the well-being of their members?

We use an Excel sheet to maintain documentation. We feed data into the system once we clock out from our part-time work hours.

Interview Notes #4:

Name: Tejaswini **Age:** 32 **Occupation:** Residency in medicine

Concerned about: Grandparents in India

Place: Hospital

Health concern: Alzheimer's disease

Question 1: How do you monitor your grandparents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track of the same?

I, being a doctor in Chicago, do not go to India very often. My grandparents live in India with family, but they cannot be with them most of the time. One of my grandmothers lives alone. Being a medical student, though the medications could be different, I would love to make sure that they take the right medication at the right time. So, I verbally ask my grandparents and my family to make sure that they take their medications on time. But I do not want to question my family either. I do wish that there was a device that is simple to use for them to understand and analyze their vitals at the least. But for now, it is all verbal.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

My grandmothers have only my aunt and my mother helping them out throughout the day. Sometimes I wish my mom and my aunt had a break from time to time. So, we alternate with another aunt or sometimes we leave our grandparents alone. This is when we get very concerned, the aunts and I talk to my grandmom throughout the day in turns, but we are always concerned about them in this so "independent world". We could hire a caregiving facility. But since we do have a rotation, there is less to no caregiving facility that would travel with them too. See we could get a local person we trust, but we do not trust the society in India very much. It causes security concerns.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Like I said before, the phone is the only way we have her connect directly. We also rely on neighbors, but we hate to bother them. So, in case they do not lift the phone, we call up the

neighbors to check on them. There was one time my grandmother fainted; I was glad that we were around her for that time. Now that she is alone at times, I do not know how she can help herself. Luckily, we do have relatives around the house too. So, they keep checking on her. One of them is a doctor too, so in case of any emergency, he is called. But the problem is, we need someone to call him.

Interview Notes #5:

Name: Siddharth **Age:** 24 **Occupation:** Student at northeastern

Concerned about: Grandparents in India living alone.

Place: University

Health Concern: Parkinsons, diabetes, general bed ridden senior citizen.

Question 1: How do you monitor your grandparents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

My grandfather was a diabetic patient. My uncle was a doctor, so he used to monitor his daily dosage for one hour everyday by having the hourly box device. They also have the dietary instructions too. The only way to find out if he ate or took the medication on time is find empty boxes and vessels. But later, he kept forgetting do all this as he grew older.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

My grandmother is had Parkinson's. She did have a caregiver, but we had to constantly monitor the caregiver. This arrangement was only for the weekdays and the weekends were the family's turn to take care. We weren't sure of the activities of the caregiver. We could trust her, but we couldn't not be too sure of her routine.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Though I used to live away from my grandparents, we luckily had my uncle who was a doctor around. For my other family though, the elderly were bed ridden. They had a bell arrangement to buzz. So, an attender could attend to them when in need.

Team member #3 name: Sanyam Sharma

Interview Notes #1:

User 1

Name: Mathew (Parents in their 60s living in Chicago)

Age: 29

Occupation: Software Engineer

Place: Neighbor Apartment

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

Answer 1: I live away from my parents they live in Chicago and I mainly rely on phone calls to stay in touch. I try to visit them 3-4 times a year. I am particularly concerned about my father's heart health, as there have been instances when it spiked. I've tried to find a solution, but haven't been able to find anything concrete that can give me real-time data of his health.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: I need something that could help me gather all the data on his health, something that could remind him to take his medicine on time and motivate him to track his fitness, like daily steps and everything. They do not need a caretaker as they are able to manage their own tasks, but they definitely need a reminder and tracking platform.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Answer 3: It's definitely challenging to track their health data from afar, and in case of an emergency, it becomes even more difficult as I am not aware in real-time. I only find out if somebody tells me about it. Like last time something like that happened, my uncle had called me after he took my father to the doctor.

Interview Notes #2:

Name: Steve (Second child with Autism)

Age: 31

Occupation: Security Personnel

Place: Neighbor Apartment

Question 1: How do you monitor your kid's health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

Answer 1: I keep track of all his medications and ensure his safety, as I've had 2 instances where I was busy with office work and he left the apartment. I've tried some location trackers, but none really provide a holistic platform for all the things that I am currently looking for.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: It's difficult to keep track of him when I am working because I have had instances

where I was not able to find him for 1 hour, and eventually found him in my neighbor's apartment. I have tried to use location trackers, but the problem remains with medicines, which I have to keep track of. It's a bit difficult to remember the exact times with my work. I looked for a solution that had all the necessary features but was not able to find anything.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Answer 3: I always try to be there with him, but if I can't, I try to arrange for caretakers, especially if I'm going on a work-related trip. The problem with caretakers is that they're not very reliable. Once, a caretaker left the apartment without informing me, and I found out from my neighbor after they heard my child cry. So, having a way to check if they have arrived and are with my child at the moment would be beneficial.

Interview Notes #3:

Name: Sarah (Mother with Alzheimer's)

Age: 29

Occupation: Homemaker

Place: CVS Roxbury

Question 1: How do you monitor your parent's health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track of the same?

Answer 1: I usually have to monitor my mother's health through daily check-ins and keeping track of her medications. I also have to ensure she does not wander off and maintain her safety at home. I have tried a reminder app and location tracker, but it's difficult to find a balance between both.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: I rely on family support and occasional professional caregivers to assist with daily tasks due to her illness. Arranging caregiving facilities can sometimes be difficult, and ensuring their presence with the patient is another task.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Answer 3: To handle emergency situations, I ensure that they have access to emergency contacts and medical information readily available. Additionally, I stay in regular communication with them and their caregivers to quickly address any issues that may arise. However, it's difficult to receive real-time updates in case of incidents like falls.

Interview Notes #4:

Name: Mary

Age: 49

Occupation: Caretaker

Place: CVS Roxbury

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients?

Answer 1: I have to keep track of multiple patients every day and on different days of the week. Currently, I am using just a reminder app to keep track of the details. It's difficult to keep track of their individual needs, and getting a notification in case of an emergency is also very difficult, as I am relying on somebody to provide me with this information.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations?

Answer 2: I just text them in case of anything and usually only provide updates if they ask for them. It's not easy to update the family in case of an emergency, as I have to attend to the emergency as the first priority and ensure their safety. Then, I update the family members via call.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members?

Answer 3: No, I just use manual handwritten notes for every visit to keep track of their data. It's a bit difficult to manage for different patients, but I have not found another solution yet.

Interview Notes #5:

Name: John M.

Age: 34

Occupation: Hospital Receptionist

Place: Boston Medical Center Reception

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients?

Answer 1: Sometimes it becomes difficult to keep track of the needs of multiple patients if the staff is changed, as they might not be aware of all the requirements of individual patients.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations?

Answer 2: We update them once they visit; however, we do not provide real-time or regular updates due to the challenge of managing multiple patients. In case of emergencies, we inform them via phone call, but our first priority is always attending to the patient.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members?

Answer 3: We have our own platform to keep track of their daily medication, which notifies the staff about the patients and their daily medicinal requirements. However, we lack a tracking mechanism to monitor patients with dementia. We've experienced instances where they left the facility without permission, making it difficult to locate them.

Team member #4 name: Vishak Vijayakumar

Interview Notes #1:

Name: Nithin **Age:** 36 **Occupation:** Entrepreneur

Concerned About: Elderly mother who is alone at home while he travels for work

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track of the same?

Answer 1: I ensure medicines are bought and have to call and check if she has had them. I do use a physical medical tracker box but often find that mom has not had the medicines on time.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: My mother personally does not like another person coming and living at our house. She cherishes her independence. I did check with a caregiver facility to make periodic checks on her health and that is the most we have in place currently. I feel that the caregivers who come often do not know of medical history and just come to take the readings.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Answer 3: I am constantly worried about her, if she has eaten, if she is well. It is always on my mind when I travel or am away from home. I ask my neighbors to keep an eye on her when I am not there, but they too are out of station often.

Interview Notes #2:

Name: Arun **Age:** 38 **Occupation:** Automobile Engineer

Concerned about: His aging parents are alone at home a lot of times especially after they moved to a new house and locality, they do not know many people who would check up on them.

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track of the same?

Answer 1: I currently ensure they are taken to hospitals for periodic checks and my brother tries to visit and stay with them during the weekends and on holidays. There was a time when my father was feeling uncomfortable, but I had no idea what the issue was and he had to be rushed to a hospital, he had forgotten to take his blood pressure medication. I use reminders on his and my phones to track medicine intake.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: As my dad gets older, he has become forgetful, and mom must remind him of many things. As the load on their lives increased, I reached out to a caregiving facility to keep checking up on them. But I feel they lack personalized care and lack an empathetic approach when dealing with elderly people.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Answer 3: I am worried about them and their health all the time, especially when I am not at home, or my brother isn't at home too. We have a caregiver on speed dial on my parents' phone and they have been taught to use it. But I am not fully sure about the efficiency of this in a time of need. I am always worried about their health.

Interview Notes #3:

Name: Jane **Age:** 33 **Occupation:** Architect

Concerned about: Has a brother Jack who is autistic and requires special attention.

Question 1: How do you monitor your loved ones' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track of the same?

Answer 1: Someone must constantly be available to ensure that his medicines are taken on time and that he doesn't wander off. I did try to use a GPS tracker as it was getting very difficult for me to balance caregiving duties with other responsibilities such as work, household chores, and personal commitments.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

Answer 2: Current assistance is primarily provided by family members, including parents, siblings, or other relatives. Sometimes, additional support may be sought from professional caregivers, therapists, or specialized programs. Lack of specialized care tailored to the unique needs of individuals with autism, leading to challenges in addressing sensory sensitivities,

communication difficulties, and behavioral issues. I feel there is insufficient staff training and expertise in autism spectrum disorder (ASD), resulting in inadequate support for managing challenging behaviors and implementing effective interventions. I need help with medical-related tasks such as administering medication and monitoring health indicators. I'm concerned about the inflexible nature of caregiving facilities.

Question 3: What are the problems you face when your brother is not with you? How do you handle emergency situations?

Answer 3: I am always worried about his well-being; he is very sensitive and doesn't get on well with all people. I do maintain regular communication through phone calls, video chats, or messaging apps to stay informed about his well-being and any concerns he may have.

Interview Notes #4:

Name: George **Age:**38 **Occupation:** Caregiver

Question 1: What issues do you run into daily while monitoring multiple patients? (Individual caretaker/Caregiving facility)

Answer 1: We often find that we have to go and visit a lot of patients and it takes a toll on us as well. This may be due to being understaffed and we often face scheduling conflicts.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? (Hospitals)

Answer 2: We do keep files on all our patients and a copy is provided to the family members as well. Apart from that we do take requests from family members who need a particular file, and we share it with them via email. In case of medical emergencies in hospitals, the primary motive is to provide emergency medication and resuscitation. So, we focus on that first and then inform family members.

Question 3: Is there any tool/technology you use to monitor their members' well-being? (Retirement homes and Support groups)

Answer 3: Yes, we use a lot of peripheral devices that monitor different health conditions, like heart rate monitors and we take periodic blood pressure checks on all our patients apart from periodic ECG checks.

Interview Notes #5:

Name: Floyd **Age:** 42 **Occupation:** Caregiver specialized in Alzheimer's care

Question 1: What issues do you run into daily while monitoring multiple patients? (Individual caretaker/Caregiving facility)

Answer 1: No two patients are the same, giving personalized care to monitor health and wellbeing and provide specialized care is challenging.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? (Hospitals)

Answer 2: We primarily use emails for periodic health checkup reports. During an emergency situation, we directly call the family members up.

Question 3: Is there any tool/technology you use to monitor their members' well-being? (Retirement homes and Support groups)

Answer 3: Yes, we use ECG monitors, pulse oximeters and blood pressure monitors. We also use automated devices for organizing and dispensing medications according to prescribed schedules ensuring the residents are on time with their medications.

Team member #5 name: Bharath Vittal

Interview Notes #1:

Name: Kecia

Age: 30

Occupation: Caretaker (Susan S Bailis Assisted Living)

Interview location: Assisted Living Facility

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients?

It is hard to keep up with all the residents that I'm responsible for. If I could get alerts for high-risk residents for medication reminders and assistance it would be useful.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations?

We share daily updates of the residents with the family members via text/email. In an emergency, we try calling but often can't reach family members right away which causes distress. A tool to instantly notify families could help.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members?

We do periodic check ins, but the residents are on their own around the facility. We have looked into home monitoring devices, but they can be invasive.

Interview Notes #2:

Name: Luz

Age: 68

Occupation: Retired wife living with her husband

Interview location: Walgreens

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

I try best to watch my husband's health but it's hard when I'm not tech savvy. He has high blood pressure, and I would love an easy way for both of us to track our medication, blood pressure and doctor appointments.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

My husband needs help with chores and errands now that mobility is declining. I am not able to assist as I have my own health issues. We looked at some caregiving facilities, but they are expensive and not the need of hour.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

When I'm out meeting friends or running some errands, I'm worried that my husband will fall or have an emergency. He is stubborn and refuses to wear an alert button. I wish there was a way I can track him when I'm away from him.

Interview Notes #3:

Name: Ashwin

Age: 34

Occupation: Business Analyst

Interview location: Zoom call

Question 1: How do you monitor your parents' health and are there any specific health-related

concerns that you manage independently? Have you explored any solutions that help you keep track the same?

My father has dementia and he forgets to take his medications on time and doctor visits. I try setting reminders, alarms and even used pill reminder apps, but it's not foolproof. I wish there was an easier way for his pill reminders and manage his schedule.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

My dad needs more help now due to his cognitive decline and refuses to take in-home assistance. I try to manage with my job and young kids, but it is difficult to manage. I wish there was an app that is designed with keeping dementia patients in mind.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

I'm worried that my dad will wander and get lost. He won't wear any tracking devices. I would love a simple way to check his location and get notified of any unusual activity without feeling like being spied on.

Interview Notes #4:

Name: Ishwarya (Granddaughter with an aging grandfather)

Age: 31

Occupation: Assistant Professor

Interview location: Zoom Call

Question 1: How do you monitor your parents' health and are there any specific health-related concerns that you manage independently? Have you explored any solutions that help you keep track the same?

My grandfather is in his 70s and live an hour away from my mother. She is worried about him as he constantly steps out of the house. She calls him daily to know his whereabouts and takes him for frequent health checkups as he doesn't have any major health issues.

Question 2: In what ways do you require assistance with daily activities, and how is this assistance currently provided? What are the shortcomings of caregiving facilities?

I need a solution to constantly know his whereabouts and track his health vitals and daily medication.

Question 3: What are the problems you face when your elderly loved ones are not with you? How do you handle emergency situations?

Unless his neighbor or himself calls us, I won't have a clue about emergency situations. I looked into some apps that can monitor vitals remotely, but they were expensive and confusing for him to use. I wish there was an easier way for me to know he's okay when I can't be there.

Interview Notes #5:

Name: Devi

Age: 40

Occupation: Nurse, Apollo Hospital

Interview location: Phone call

Question 1: What kind of issues do you run into on a daily basis while monitoring multiple patients?

Trying to monitor my patients vitals, medication schedules, and daily needs can be overwhelming, especially with 5+ patients per day. I often can't catch an emergency right away if I'm with another patient. Better remote monitoring tools would help me keep tabs on everyone.

Question 2: How do you share your patient's health data with family members? And how quickly do you update the family about emergency situations? And how quickly do you update the family about emergency situations?

We have portals for sharing medical records, but they can be hard for families to access quickly. We have notifications on our portal and call the family members in case of emergency.

Question 3: Is there any tool/technology that you use to monitor the well-being of their members?

We don't have tools that monitor the overall well-being of the patient when they step outside of the hospital. We rely on the medical history.