TesseraHealth

Assignment 4: Business Model Assessment

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Section 1: Interview Guide

We designed our interview guide to surface behavioral evidence rather than opinions. Questions are open-ended and non-leading, structured to let the respondent describe what they actually do and have experienced rather than what they think we want to hear. We conducted three interviews covering all three of our personas: a remote family caregiver in Delhi, a home care nurse in Mumbai, and an outpatient physician in Jaipur.

Interview Protocol

- Duration: 30 to 40 minutes per interview, conducted over video/voice call
- Recording: With consent, sessions were recorded for reference; otherwise detailed notes were taken
- Approach: Semi-structured; same opening questions for all respondents, follow-up questions tailored to their answers
- Respondent selection: Family caregivers identified through personal networks; nurse through a home care agency contact; physician through a personal referral

Opening Questions (All Respondents)

1. Can you walk me through what managing or delivering elderly care looked like for you over the past month?
2. Tell me about a time something went wrong, or almost went wrong, because the right information was not available at the right moment.
3. How does information currently get from the person physically with the patient to the person making clinical decisions about their care?

Family Caregiver-Specific Questions

4. When you are not physically with your parent, how do you know whether they are doing okay or not?
5. Walk me through the last time you had to make a decision about your parent's care from a distance. What information did you have, and what were you missing?
6. If your parent had to go to the emergency room tonight, what would the doctor know about them, and how confident are you in that?
7. What tools or systems, if any, do you currently use to stay on top of your parent's health? What made you choose those?
8. What is the most stressful part of coordinating your parent's care from where you are?

Home Care Nurse-Specific Questions

9. Walk me through how you document what happens during a shift from start to finish.
10. What happens at the end of your shift? How do you hand over to the next nurse?
11. Tell me about a time an observation you made during a shift did not make it to the family or the doctor. What happened?

12. What would need to be true about a new documentation tool for you to actually use it consistently during a shift?
13. How do families usually find out about changes in the patient's condition? What role do you play in that?

Physician-Specific Questions

14. When a home-care patient comes to see you, what information do you typically have access to before the appointment?
15. How often do you feel like you are making decisions without the full picture of what has been happening at home?
16. Tell me about a patient case where better between-visit information would have changed your clinical decision.
17. If a structured 30-day summary of a patient's home observations arrived before their appointment, how would that change how you prepare for the visit?
18. What format would that summary need to be in for you to actually read and use it in a seven-minute consultation?

Section 2: Interview Summaries

Interview 1: Priya Nair, 38, Delhi (Family Caregiver Persona)

Priya is a senior HR manager at a multinational firm in Delhi. Her 73-year-old mother lives in Thiruvananthapuram with a full-time home nurse arranged through an agency. Her mother manages Type 2 diabetes, hypertension, and moderate hearing loss. Priya visits four to five times a year.

Key Quotes

> *"The nurse is fantastic. She notices everything. The problem is that what she notices stays with her. It doesn't go anywhere useful."*
>
> *"I found out my mother's blood pressure had been spiking for three days because she mentioned it on a Sunday phone call. Not from the nurse. Not from anyone. My mother just happened to say it."*
>
> *"The last ER visit, I was on a flight. My husband was trying to reconstruct her medication list from memory and photo of a prescription from four months ago. It was terrifying."*

Key Findings

- Uses a WhatsApp group with the nurse, her brother in Bengaluru, and herself as the primary coordination mechanism; describes it as a 'leaky bucket, things fall through constantly'
- Has a photographed prescription saved in her phone gallery that she considers her backup medication list, but acknowledged it is out of date

- The nurse calls her when something significant happens, but Priya has no visibility into the days between those calls
- Had one ER visit 14 months ago where the treating physician did not know about a blood thinner her mother was taking; the family caught it, but only because Priya's brother happened to remember
- Said she would pay for a tool that gave her 'something like a dashboard, just let me see that she's okay without having to call every night'
- Biggest frustration: 'Every new nurse I hire, I have to start over. There is no file. No record. Just me explaining everything again on a phone call'

Interview 2: Ravi Shankar, 31, Mumbai (Home Care Nurse Persona)

Ravi is a GNM-certified nurse working through a mid-sized home care agency in Mumbai. He currently manages five elderly patients across four households, working 10-hour day shifts Monday through Saturday. He has been in home care nursing for four years.

Key Quotes

> *"I write in the register every day. But I don't think anyone reads it. The next nurse who comes, she just asks me verbally when I'm leaving. That's the handoff."*

> *"I noticed Mr. Patil's breathing had changed over two days. I told the family on WhatsApp. They said okay. Did the doctor know? I don't think so. He didn't mention it at the next visit."*

> *"If I could just speak into my phone for one minute at the end of the shift, that would be enough. I don't want to type. I don't have time to type."*

Key Findings

- Maintains a physical register at each patient's home; acknowledges incoming nurses rarely consult it, defaulting to a verbal briefing that can take 10 to 15 minutes
- Uses WhatsApp to communicate with families in real time but describes it as one-directional: he sends, they acknowledge, nothing is structured or searchable
- Has noticed clinically relevant changes in patients (appetite patterns, breathing, gait changes) that he reported informally but that were never surfaced to the physician
- Primary resistance to new tools: typing is too slow mid-shift, app interfaces designed for clinical settings are too complex for his workflow
- Expressed genuine interest in a voice note tool that automatically structured his words into a shift summary; said 'if it can understand Malayalam-accented English, I will use it every day'
- Biggest pain point: 'When something goes wrong after my shift, people ask what happened during my shift. And I have to look in the register. Sometimes I can find it. Sometimes the writing is messy or I forgot to write. It feels unfair'

Interview 3: Dr. Sunita Agarwal, 54, Jaipur (Physician Persona)

Dr. Agarwal is a general physician at a private clinic in Jaipur with a focus on geriatric patients. She sees 30 to 35 patients per day, of whom she estimates 40% are elderly with at least one chronic condition being managed partly through home care.

Key Quotes

> *"A family comes in with a folder. Inside is a discharge summary from 2022, two prescriptions, and a lab report. That is the medical record. That is what I have to work with."*
>
> *"I ask: how has she been at home? And the family says: fine, doctor. Fine. What does fine mean? Was her blood pressure fine? Was she eating? I don't know."*
>
> *"If someone sent me a one-page summary before the appointment, I would read it. It would have to be one page. I have seven minutes. I cannot read a report."*

Key Findings

- Has no structured mechanism for receiving between-visit information from home carers; all context arrives verbally from family members at the appointment
- Described multiple instances of making medication decisions she later felt were uninformed because she did not know what had changed at home since the last visit
- Had a patient case where an anticoagulant interaction was missed because a new medication added by a cardiologist was not communicated to her before she prescribed a pain reliever; caught at the pharmacy
- Open to receiving AI-generated pre-visit summaries but explicit about format requirements: single page, bullet point format, nothing that requires clinical interpretation to read
- Expressed skepticism about whether nurses would actually log consistently: 'The nurses I know are busy. They don't have time for documentation. It would have to be very simple for them to actually do it'
- Biggest opportunity she named: 'If I knew what the patient's blood pressure had been doing for three weeks at home, not just what the family tells me, I could catch things much earlier'

Section 3: Updated Personas (Post-Interview)

Our interviews confirmed the core structure of our three personas while adding important nuance to each. The updates below reflect what the interviews changed or deepened in our understanding.

Updated Persona 1: "Anxious Anika" - The Remote Family Caregiver

> *"The nurse is fantastic. She notices everything. The problem is that what she notices stays with her. It doesn't go anywhere useful."*

What the Interviews Changed

- Before interviews, we assumed the primary frustration was the lack of a shared record. After interviews, we see the frustration is more specific: families trust the nurse's clinical competence but have no pathway to benefit from it. The observation happens. It just evaporates.
- We underestimated how improvised the backup documentation is. A photo of an old prescription saved in a phone gallery is not a medication list. It is the illusion of one.
- The ER scenario is not hypothetical for this persona. Two of the three family caregiver respondents had experienced an ER visit where medication reconstruction happened from memory under stress. This is a lived experience, not a hypothetical risk.
- Willingness to pay is real and unprompted. Priya volunteered a price range without being asked. This shifts our confidence in the B2C family tier as a revenue stream.

About

- 38-year-old HR manager at a multinational firm in Delhi; her 73-year-old mother lives in Thiruvananthapuram with a full-time home nurse arranged through an agency
- Mother manages Type 2 diabetes, hypertension, and moderate hearing loss; four to five in-person visits per year
- Primary care coordination mechanism: a WhatsApp group with the nurse and her brother, which she describes as a 'leaky bucket'
- Has a photographed prescription in her phone gallery as her backup medication list; acknowledges it is out of date

Goals/Tasks

- See that her mother is okay without having to call every evening
- Have a current, reliable medication list accessible at any moment, not reconstructed from memory under stress
- Stop losing context every time a new nurse starts a shift

Frustrations

- Clinically relevant observations the nurse makes never reach the physician; the information loop has a gap between the nurse's shift note and the doctor's appointment
- The 'medical record' she carries to appointments is a folder of outdated documents; the physician makes decisions on a three-month-old snapshot

- Every new nurse requires a full verbal briefing from Priya; there is no persistent patient file that a new carer can simply read

Why She Is a Challenge

- Lives in a different city from both the patient and the nurse; her adoption of TesseraHealth is necessary but not sufficient, the nurse has to log for the platform to have anything useful to show her
- Already has a workaround she is emotionally invested in (the WhatsApp group); the bar for switching is higher than it would be for someone with no existing system

Updated Persona 2: "Overworked Om" - The Home Care Nurse

> *"If I could just speak into my phone for one minute at the end of the shift, that would be enough. I don't want to type. I don't have time to type."*

What the Interviews Changed

- The physical register is less of a documentation tool and more of a ritual. Nurses write in it because they are expected to, not because it serves a function anyone depends on. This means our competition is not really the register; it is inertia.
- The handoff problem is more acute than we had framed it. The incoming nurse does not read the register. The handoff is verbal and rushed. Information loss happens at every shift change, not just occasionally.
- Ravi's quote about fairness, being held responsible for things that happened after his shift because there was no record, points to a professional accountability motivation we had underweighted. Om is not just looking for convenience. He wants a paper trail that protects him.
- Language and accent are a real product concern. Ravi explicitly raised whether the voice logging could handle Malayalam-accented English. Our AI layer needs to be tested specifically on Indian English accents.

About

- 31-year-old GNM-certified nurse working through a home care agency in Mumbai; manages five elderly patients across four households on 10-hour day shifts
- Four years of home care nursing experience; observant and clinically skilled
- Documentation method: physical register plus WhatsApp messages to family; no digital clinical logging tool
- Primary constraint: no time to type mid-shift; voice logging is the only realistic input method

Goals/Tasks

- Complete the shift handoff without spending 10 to 15 minutes verbally briefing the incoming nurse

- Have a searchable record of what he observed during each shift so he can answer questions from families and physicians accurately
- Protect himself professionally by having documented evidence that he flagged what he noticed

Frustrations

- Clinically significant observations he makes informally (on WhatsApp or verbally) have no formal status; they do not make it to the physician and cannot be retrieved later
- The incoming nurse relies on verbal briefings that are rushed and incomplete; important context gets dropped at every shift change
- When things go wrong after his shift, the absence of a clear record puts him in a difficult position professionally

Why He Is a Challenge

- Must be faster than the paper register from day one; any interface requiring typed structured entries will be abandoned within the first week
- Needs to trust that the AI is accurately representing what he said before he will rely on it; a single significant misrepresentation would destroy his confidence in the tool

Updated Persona 3: "Dr. Mehra" - The Outpatient Physician

> *"If someone sent me a one-page summary before the appointment, I would read it. It would have to be one page. I have seven minutes. I cannot read a report."*

What the Interviews Changed

- The format constraint is non-negotiable and more specific than we had anticipated. One page, bullet points, nothing that requires clinical interpretation. This is not a preference; it is a hard constraint of the seven-minute consultation.
- The physician's trust problem cuts in two directions. Dr. Agarwal expressed skepticism not just about whether the data would be accurate, but about whether nurses would actually log consistently enough to make the summary meaningful. This means we need to address nurse adoption credibly before physician adoption becomes possible.
- The medication interaction risk she described (anticoagulant plus pain reliever) was caught at the pharmacy, not at the clinic. The near-miss happened precisely because between-visit medication changes were not visible to her. This is the clearest real-world validation of our thesis we have heard.

About

- 54-year-old general physician in Jaipur; 30 to 35 patients per day, approximately 40% elderly with at least one chronic condition being managed through home care

- ABDM registered; no structured mechanism for receiving between-visit home care information
- Willing to use pre-visit summaries only if format is a single page, bullet points, and does not require clinical interpretation to read

Goals/Tasks

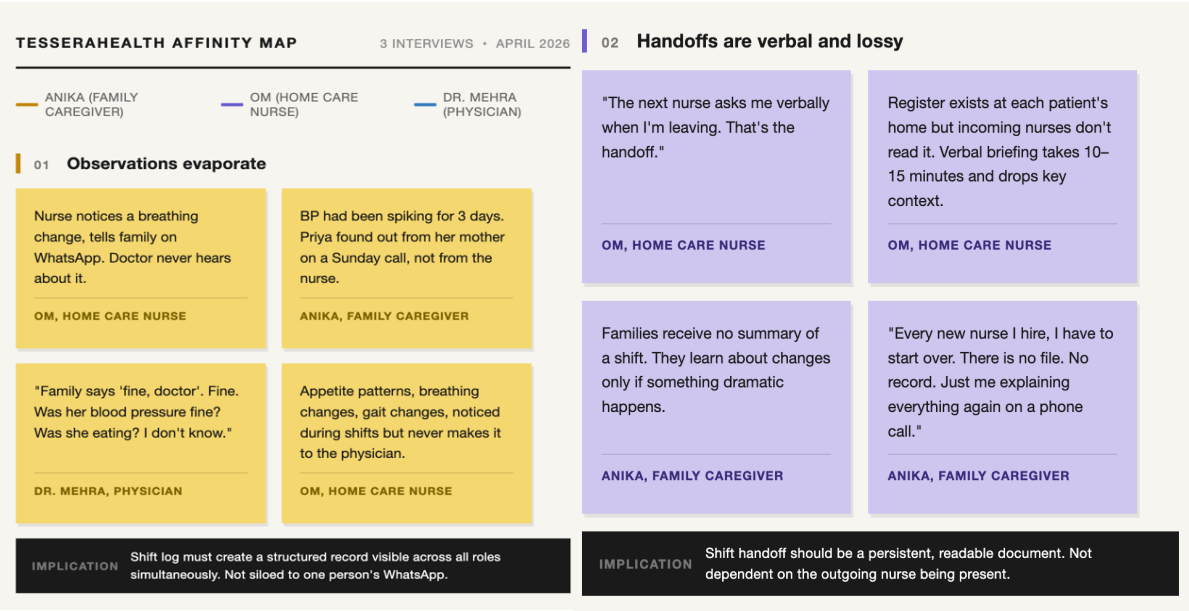
- Know what has actually been happening at home over the past 30 days before each appointment, not rely on the family's verbal account of 'fine, doctor'
- Catch medication interactions and deterioration trends before they become emergency presentations
- Maintain a manageable patient load without adding documentation burden to her already over-capacity practice

Why She Is a Challenge

- Will not install a new app or log into a new portal; the summary must arrive through a channel that requires zero behavior change from her (email, WhatsApp, or in-clinic tablet)
- Her adoption depends entirely on whether Om and Anika are already using the platform consistently; she cannot benefit from data that has not been logged

Section 4: Affinity Map

We synthesized our three interviews into the themes below by grouping all raw observations, quotes, and behavioral data points by pattern rather than by respondent.



03 ER = information crisis

Husband reconstructed medication list from memory and a photo of a prescription from 4 months ago during an ER visit. "It was terrifying."

ANIKA, FAMILY CAREGIVER

A blood thinner was unknown to the ER treating physician. Caught only because a family member happened to remember.

ANIKA, FAMILY CAREGIVER

Anticoagulant and pain reliever interaction caught at the pharmacy, not the clinic. Medication change was never passed on.

DR. MEHRA, PHYSICIAN

A photographed prescription saved in a phone gallery is not a medication list. It is the illusion of one.

ANIKA, FAMILY CAREGIVER

IMPLICATION QR Emergency Card must be a core feature, not a nice-to-have. It is the most high-stakes instance of the information gap.

04 Accountability gap

"When something goes wrong after my shift, people ask what happened. Sometimes I can't find it in the register. It feels unfair."

OM, HOME CARE NURSE

Om wants a record of what he logged. Partly to protect himself if something goes wrong after his shift.

OM, HOME CARE NURSE

Medication changes made by one specialist are unknown to the GP. Decisions happen on an incomplete picture.

DR. MEHRA, PHYSICIAN

WhatsApp messages to family are one-directional: sent, acknowledged, but not structured or searchable.

OM, HOME CARE NURSE

IMPLICATION The platform needs timestamped records that protect everyone: the nurse, the family, and the physician.

05 Format friction kills adoption

"If I could speak into my phone for one minute at the end of the shift, that would be enough. I don't want to type."

OM, HOME CARE NURSE

"If someone sent me a one-page summary before the appointment, I would read it. It would have to be one page. I have seven minutes."

DR. MEHRA, PHYSICIAN

Priya wants "something like a dashboard. Just let me see that she's okay without calling every night."

ANIKA, FAMILY CAREGIVER

"If it can understand Malayalam-accented English, I will use it every day." Voice input must work reliably in Indian English.

OM, HOME CARE NURSE

IMPLICATION Each touchpoint needs a different format: voice for nurses, a quick dashboard for caregivers, one page for physicians.

Section 5: User Stories

The 20 user stories below are written primarily for Anika (family caregiver) with supporting stories for Om (home care nurse) and Dr. Mehra (physician). All follow the format: As a [persona], I want to [action], so that [goal].

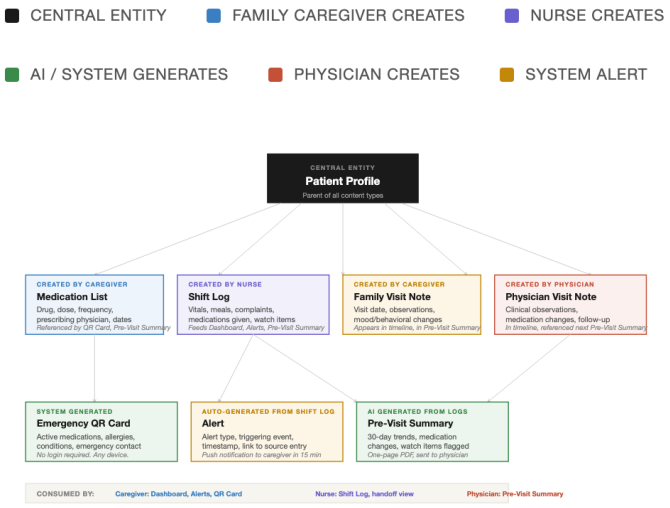
#	Persona	User Story	Acceptance Criteria
1	Anika	As a remote family caregiver, I want to see a daily summary of my mother's condition without calling the nurse, so that I stop spending every evening anxious about whether something happened that no one told me.	Dashboard shows last logged shift summary on home screen; updates within 2 hours of shift end; includes vitals, meals, and notable observations.
2	Anika	As a remote family caregiver, I want to receive an alert when the nurse logs something flagged as a watch item, so that I can decide whether to call the physician or escalate before it becomes an emergency.	Flagged observations trigger a push notification to the family caregiver within 15 minutes; notification includes the specific observation and who logged it.
3	Anika	As a remote family caregiver, I want to store and update my mother's current medication list in one place, so that I never have to reconstruct it from photos and memory in an emergency.	Medication list is editable, timestamped on last update, and accessible via the Emergency QR Card with no login required.
4	Anika	As a remote family caregiver, I want to share a QR code with an ER physician that shows my mother's full medication list and current conditions, so that the treatment team has reliable information even if I am not physically present.	QR card is accessible without login; renders on any device; includes medication name, dose, frequency, prescribing physician, allergies, and last updated date.
5	Anika	As a remote family caregiver, I want to see a timeline of my mother's observations over the past 30 days, so that I can spot patterns before they become crises rather than only learning about changes after an ER visit.	Timeline view shows all logged entries chronologically; filterable by observation type (vitals, meals, complaints, medications); exportable as PDF.
6	Anika	As a remote family caregiver, I want to onboard a new nurse to my mother's care record in under 10 minutes, so that each new carer starts with full context instead of requiring me to brief them over the phone.	New carer invited via phone number; upon accepting, immediately sees patient profile, current medications, active conditions, and the last 30 days of shift logs.
7	Anika	As a remote family caregiver, I want to add multiple family members to the care team so that my brother and I see the same information at the same time, so	Up to 5 family members can be added; all see the same real-time dashboard; notification preferences are individual.

		that we stop comparing notes from different WhatsApp conversations.	
8	Anika	As a remote family caregiver, I want to see when the nurse last logged a shift, so that I know if a day has been missed and can follow up before a gap in the record becomes a problem.	Dashboard shows last log timestamp prominently; if no log in 24 hours, a subtle reminder is sent to the carer and a flag appears on the family dashboard.
9	Anika	As a remote family caregiver, I want the platform to generate a pre-visit summary I can share with the physician before an appointment, so that we do not waste the first 3 minutes of a 7-minute consultation catching the doctor up on what has happened at home.	Pre-visit summary generates as a one-page PDF; includes 30-day observation trends, medication changes, and flagged items; shareable via WhatsApp or email.
10	Anika	As a remote family caregiver, I want to add notes about my own observations when I visit in person, so that my perspective is part of the record alongside the nurse's daily logs.	Family members can add a 'Family Visit Note' entry type; visible to all care team members; distinct from nurse shift logs in the timeline view.
11	Om	As a home care nurse, I want to log my shift observations by speaking into my phone, so that I can complete documentation in under two minutes without stopping to type mid-shift.	Voice input captured and transcribed; AI structures output into shift note with vitals, meals, complaints, and medications sections; nurse reviews and confirms before submission.
12	Om	As a home care nurse, I want the incoming nurse to be able to read my shift summary before they arrive, so that the handoff is not a 15-minute verbal debrief and I can leave on time.	Shift note visible to all carers on the patient's care team immediately upon submission; incoming nurse receives a push notification.
13	Om	As a home care nurse, I want to flag a specific observation as a watch item, so that the family caregiver and physician are aware it needs monitoring without me having to individually notify each person.	Flag option available on any observation within a shift note; flagged items appear highlighted on the family dashboard and in the physician's pre-visit summary.
14	Om	As a home care nurse, I want to see the previous nurse's shift summary before I start my shift, so that I am not starting from zero and can provide continuity of care rather than discovering things mid-shift.	Last 3 shift summaries visible to any carer logged into the patient's care team before starting a new shift entry.
15	Om	As a home care nurse, I want a record of every observation I have logged, so that if a question arises about something that happened during my shift I can retrieve the exact entry rather than rely on memory.	All logged entries are permanently associated with the nurse who logged them, timestamped, and retrievable by date; visible to the nurse in their personal log history.

16	Om	As a home care nurse, I want the voice logging to understand Indian English accents accurately, so that the structured output reflects what I actually said and I can trust it to represent my observations correctly.	Voice transcription accuracy tested across five Indian English accent variants; nurse review step allows correction before submission; error rate target below 8% on first pass.
17	Dr. Mehra	As an outpatient physician, I want to receive a one-page pre-visit summary of a patient's home observations before their appointment, so that I can prepare for the consultation with current information rather than relying on the family's verbal account.	Summary sent 2 hours before appointment via WhatsApp or email; maximum one page; bullet point format; includes 30-day observation trends and flagged watch items.
18	Dr. Mehra	As an outpatient physician, I want the pre-visit summary to highlight medication changes since the last visit, so that I can check for interactions before the appointment rather than discovering them at the pharmacy.	Any medication added, changed, or discontinued since the last physician visit is highlighted in the summary with the date of change and who made the change.
19	Dr. Mehra	As an outpatient physician, I want to add a clinical note after an appointment that becomes part of the patient's care record, so that the nurse and family know what was discussed and what to monitor going forward.	Post-visit note entry available to physicians; visible to all care team members; appears in timeline as 'Physician Visit Note' distinct from nurse shift logs.
20	Dr. Mehra	As an outpatient physician, I want to be able to access a patient's emergency record by scanning their QR code, so that if a patient I am not familiar with presents at my clinic or an emergency department I have immediate access to their current medications and known allergies.	QR card accessible without login on any device with a camera; renders in under 3 seconds; displays medication list, allergies, current conditions, and last updated timestamp.

Section 6: Content Model

The content model below defines the key information types TesseraHealth manages, their attributes, their relationships to each other, and who creates and consumes each type. It is organized around the patient as the central entity, with all other content types connected to and through the patient record.



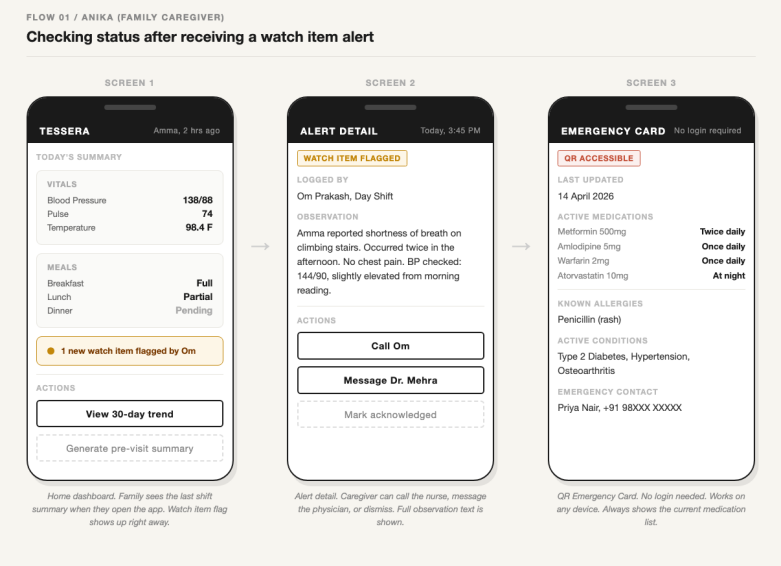
CONTENT TYPE REFERENCE

CONTENT TYPE	CREATED BY	CONSUMED BY	KEY ATTRIBUTES	RELATIONSHIPS
Patient Profile	Family caregiver	All care team members	Name, DOB, conditions, allergies, emergency contact	Parent of all types
Medication List	Caregiver / physician	All team; QR Card	Drug, dose, frequency, start date, active/discontinued	Referenced by QR Card, Pre-Visit Summary
Shift Log	Home care nurse	Caregiver, physician, incoming nurse	Vitals, meals, complaints, watch items, free-text	Feeds Dashboard, Alerts, Pre-Visit Summary
Alert	System (auto)	Family caregiver (push)	Alert type, trigger, timestamp, link to source	Generated from Shift Log watch items
Pre-Visit Summary	System (AI)	Physician, optionally caregiver	30-day trends, medication changes, watch items	Aggregates Shift Logs + Medication List
Physician Visit Note	Physician	All care team	Visit date, observations, changes, follow-up date	In timeline; referenced in next Pre-Visit Summary
Emergency QR Card	System (auto)	Any physician / ER team	Medications, allergies, conditions, last updated	Pulls from Patient Profile + Medication List
Family Visit Note	Family caregiver	All care team	Visit date, behavioral observations, photos	In timeline; in Pre-Visit Summary if within 30 days

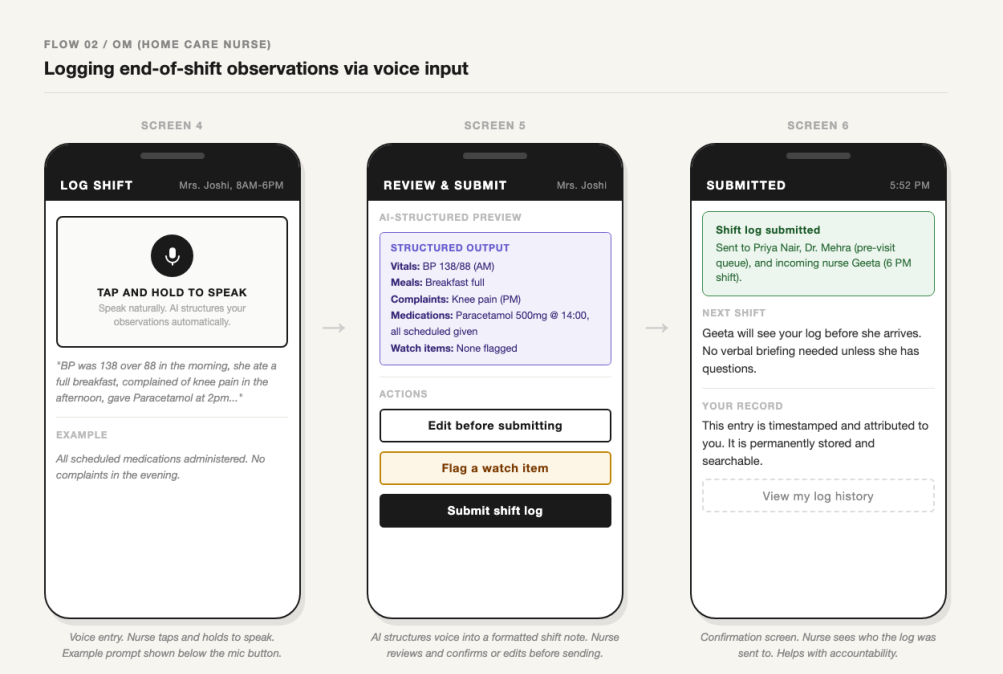
Section 7: Wireframes (MVP Happy Path)

The wireframes below represent the MVP happy path across three user flows: Anika checking her mother's status (family caregiver flow), Om logging a shift observation (nurse flow), and Dr. Mehra accessing a pre-visit summary (physician flow). These are low-fidelity representations designed to communicate layout, information hierarchy, and user flow rather than visual design.

Flow 1:



Flow 2:

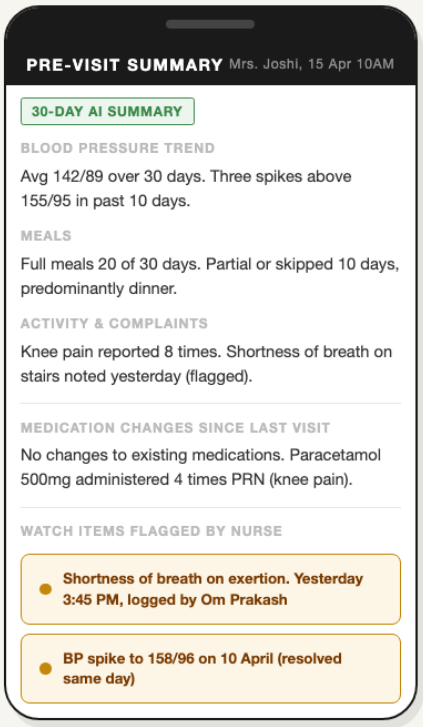


Flow 3:

FLOW 03 / DR. MEHRA (PHYSICIAN)

Receiving a pre-visit summary before a patient appointment

SCREEN 7

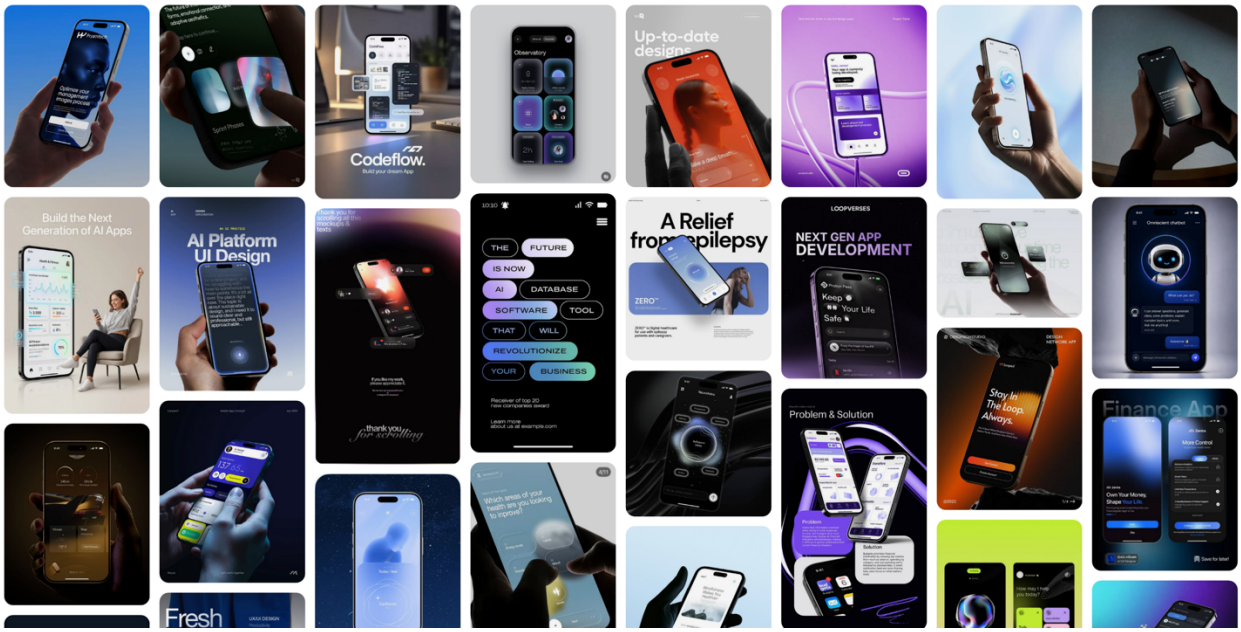


One-page pre-visit summary. Physician comes into the appointment already knowing the last 30 days.

Section 8: Mood Board

TesseraHealth's visual identity should communicate trust, calm, and quiet competence. The people using this platform are managing something emotionally heavy: a parent's health from a distance, a demanding shift across multiple households, a medical practice with no room for error. The visual language should not add to that weight. It should reduce it.

The mood board below describes the visual direction we want a designer to consider:



Visual references for a better idea:

Color and calm: Calm app, Headspace, Notion

- Clinical trust without sterility: Cedar Health, Spruce Health, Hims/Hers
- Indian mobile UI context: PhonePe, CRED, Zepto (for understanding how Indian users interact with mobile cards and navigation patterns)
- Typography in action: Linear, Loom, Superhuman (for Inter in high-information environments)