DT BUSINESS ANALYST ASSIGNMENT

TASK 2: PATIENT CARE & COMMUNICATION SYSTEM

What problem this system solves

Right now, the doctor:

- Replies to patients on WhatsApp
- Remembers follow-ups mentally
- Sends messages one by one
- Loses time switching between patients and chats

This system **absorbs that chaos** into a simple Google Sheet so that:

- Routine messages go out automatically
- Only real decisions reach the doctor
- Doctor interaction is limited to **≤10 minutes per session**

STEP 1 — Message Type Classification (One-time setup)

First, I separate **routine communication** from **doctor-dependent communication**.

Message Type List

Message Type	Example	Doctor Input Needed?
Follow-up Reminder	"Please visit on Aug 5"	No
Post-Procedure Care	"Mild swelling is normal"	No
Side-Effect Advisory	"Nausea may occur for 1–2 days"	No
Custom Instruction	"Avoid sun exposure for 7 days"	Yes
Patient Question Response	"Regarding itching…"	Yes

- Anything predictable = automated
- Anything judgment-based = doctor review

This decision alone removes **80% of WhatsApp noise**. All patient messages are first classified into predefined types. Routine messages do not need doctor input. Only custom instructions and patient questions require approval.

STEP 2 — Care Control Sheet (Daily Working Sheet)

I create **one Google Sheet** that becomes the single control panel.

Sheet Name: Care Control

Patient	Phone	Visit Type	Message Type	Doctor Approval	Status
Ramesh K	9XXXX	OPD	Follow-up	Not Required	Pending
Sita P	9XXXX	Procedure	Post-Procedure	Not Required	Pending
Arjun M	9XXXX	OPD	Custom	Required	Waiting

How it works in practice

- Data comes from HMS daily
- Routine messages auto-fill from templates
- Only **Custom / Question** rows need doctor input
- Status shows where each patient stands

No WhatsApp tracking, No mental reminders, Everything visible in one place

STEP 3 — Doctor Review Window (Every 3–4 hours)

What I do

- Filter the sheet: Doctor Approval = Required, Status = Waiting
- Sit with the doctor for **10 minutes**
- Doctor dictates or approves responses
- I type once into the sheet

What the doctor never does

- Types messages, Opens WhatsApp, Replies individually

Doctor only **reviews and decides**.

STEP 4 — Patient Question Handling (Google Form Flow)

Instead of WhatsApp messages, patients submit questions via a **Google Form**.

Google Form Fields

- Name
- Phone
- Question
- Urgency (Routine / Urgent)

Responses auto-fill another sheet.

Sheet Name: Patient Questions

Patient	Phone	Question	Answer	Status
Lakshmi	9XXXX	Is itching normal?	—	Pending

Execution

- Questions are batched every 3 hours
- Reviewed once with the doctor
- Answers recorded once
- Responses sent together

No interruptions, No repeated explanations

STEP 5 — Message Dispatch Logic

Messages are sent **only when all conditions are met**:

- Message Text is filled
- Status = Pending
- Doctor Approval = Not Required **or** Approved

Status Flow

Pending → Sent → Closed

This prevents:

- Half-written messages
- Accidental sends
- Missed follow-ups

STEP 6 — Daily Closing Check (5 mins/day)

Before clinic closes:

- Filter Status = Pending
- Ensure nothing critical is missed
- Reschedule or escalate if needed

One last safety net, No patient forgotten

OPTIONAL STEP 7 — Automation (Differentiator)

If automation is added later:

Logic (not code)

- Google Apps Script reads rows where:
  - Status = Pending
  - Message Text exists
  - Approval condition satisfied
- Sends message via WhatsApp API
- Updates Status to “Sent”

Automation follows rules, Humans handle judgment

Why this system works

- Doctor time is protected
- Clinic staff can run it daily
- Routine communication is automatic
- Exceptions are controlled, not chaotic
- WhatsApp becomes an output channel, not a workplace

In one line

This precision-driven layer manages predictable patterns, ensuring consistency and speed in baseline operations. Consequently, physicians are liberated to focus exclusively on nuanced cases where human empathy and intuition are vital.

By merging algorithmic efficiency with professional expertise, the healthcare model optimizes outcomes for every patient.