Phase II: Business Process Modeling

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1. Process Scope & MIS Relevance

This process models an **Automated Clinical Assessment** for the iCCM protocol. It functions as a **Clinical Decision Support System (CDSS)**, transforming raw symptom data from remote villages into medically valid diagnoses. The objective is to replace manual paper protocols with a centralized, database-driven logic engine (iCCM_Engine) to guarantee consistency and accountability.

2. Key Entities

Entity (Type)	Role & Responsibility
Community Health Worker (User)	**Input/Action:** Collects 20+ clinical indicators; administers treatment.
Mobile Interface (System)	**Relay:** A "dumb terminal" for data transmission; contains **no logic**.
PL/SQL Engine (System)	**Processor:** Validates data, executes rules, and manages transactions.

3. Swimlane Workflow

The workflow follows a strict "Input-Process-Output" cycle:

1. **Input (CHW):** Worker inputs patient vitals (e.g., "Breathing Rate > 50") via the app.
2. **Processing (Database):**
   - **Validation:** Engine rejects invalid types.
   - **Logic:** Queries iCCM_Rules to match symptoms against WHO protocols.
   - **Decision:** If *Danger Signs* exist, set CRITICAL (Referral). If *Moderate*, calculate dosage.
   - **Transaction:** Atomically creates Condition and MedicationRequest records.
3. **Output (Interface):** Displays diagnosis and color-coded instructions (Red/Green).

4. Impact & Analytics (BI)

- **Standardization:** Uniform diagnoses across all regions.
- **Accountability:** AUDIT_TRAIL prevents fraud.

- **BI Potential:** Real-time disease surveillance (e.g., Malaria spikes) and performance tracking.

5. BPMN Diagram