**\*These were generated with AI\***

### **Use Case 1: Register a New Mother in the Antenatal Care System**

**Actor:** Midwife/Healthcare Worker  
**Description:** A healthcare worker registers a new pregnant mother in the antenatal care system.  
**Preconditions:**

* The mother is not already registered.
* Basic personal and medical details are available.  
  **Steps:**

1. System prompts for mother's personal details (name, age, address, date of birth).
2. System captures medical details (blood group, sickling status, height, etc.).
3. System records pregnancy-related data (gestational age, estimated due date, trimester).
4. System assigns a unique registration number.
5. System confirms successful registration.  
   **Postconditions:**

* Mother is registered in the system.
* A new antenatal record is created.

### **Use Case 2: Update Mother’s Medical Information**

**Actor:** Midwife/Healthcare Worker  
**Description:** A healthcare worker updates the medical details of a registered mother.  
**Preconditions:**

* Mother is already registered.
* New medical data is available (e.g., lab results).  
  **Steps:**

1. System retrieves mother’s record using registration number or ID.
2. Healthcare worker updates relevant fields (e.g., hemoglobin levels, VDRL status, HIV counseling status).
3. System validates and saves changes.
4. System confirms successful update.  
   **Postconditions:**

* Mother’s medical record is updated.
* Changes are logged for future reference.

### **Use Case 3: Record a New Antenatal Visit**

**Actor:** Midwife/Healthcare Worker  
**Description:** A healthcare worker logs a new antenatal visit for a registered mother.  
**Preconditions:**

* Mother is registered in the system.
* Visit details (date, observations, treatments) are available.  
  **Steps:**

1. System retrieves mother’s record.
2. Healthcare worker enters visit details (weight, blood pressure, fetal heartbeat, etc.).
3. System records any administered treatments (tetanus toxoid, malaria prophylaxis).
4. System updates gestational age and trimester if needed.
5. System confirms visit is logged.  
   **Postconditions:**

* Visit is added to the mother’s record.
* Next visit date may be suggested.

### **Use Case 4: Check Pregnancy Progress (Trimester & Gestational Age)**

**Actor:** Midwife/Healthcare Worker  
**Description:** The system calculates and displays the current trimester and gestational age.  
**Preconditions:**

* Mother is registered.
* Estimated due date or conception date is recorded.  
  **Steps:**

1. System retrieves mother’s conception date or last menstrual period (LMP).
2. System calculates current gestational age in days/weeks.
3. System determines the current trimester (1st, 2nd, 3rd).
4. System displays the information to the healthcare worker.  
   **Postconditions:**

* Healthcare worker can assess pregnancy progress.

### **Use Case 5: Generate a Mother’s Antenatal Summary Report**

**Actor:** Midwife/Healthcare Worker  
**Description:** The system generates a summary report of a mother’s antenatal visits and health status.  
**Preconditions:**

* Mother has at least one registered visit.  
  **Steps:**

1. System retrieves mother’s record.
2. System compiles visit history, medical tests, and treatments.
3. System generates a summary report (including EDD, parity, hemoglobin trends).
4. Report is displayed or printed.  
   **Postconditions:**

* Healthcare worker can review the mother’s progress.

### **Use Case 6: Administer Tetanus Toxoid Vaccine**

**Actor:** Midwife/Healthcare Worker  
**Description:** A healthcare worker records the administration of a tetanus toxoid dose.  
**Preconditions:**

* Mother is registered.
* Vaccine is available.  
  **Steps:**

1. System checks previous doses administered.
2. Healthcare worker records the new dose.
3. System updates tetanus toxoid status and dose count.
4. System confirms successful update.  
   **Postconditions:**

* Mother’s immunization record is updated.

### **Use Case 7: Track Malaria Prevention Measures (IPT & ITN)**

**Actor:** Midwife/Healthcare Worker  
**Description:** A healthcare worker records Intermittent Preventive Treatment (IPT) doses and insecticide-treated net (ITN) usage.  
**Preconditions:**

* Mother is registered.
* IPT/ITN data is available.  
  **Steps:**

1. System retrieves mother’s record.
2. Healthcare worker updates IPT doses or ITN usage status.
3. System logs the changes.  
   **Postconditions:**

* Malaria prevention measures are tracked.

### **Use Case 8: Update Estimated Due Date (EDD) Based on Ultrasound**

**Actor:** Midwife/Healthcare Worker  
**Description:** The system adjusts the EDD based on new ultrasound findings.  
**Preconditions:**

* Mother is registered.
* New ultrasound data is available.  
  **Steps:**

1. System retrieves mother’s current EDD.
2. Healthcare worker enters new EDD from ultrasound.
3. System updates EDD and recalculates gestational age.
4. System confirms the update.  
   **Postconditions:**

* Pregnancy timeline is adjusted.

### **Use Case 9: Register a New Midwife in the System**

**Actor:** System Administrator / Healthcare Coordinator  
**Description:** A new midwife is added to the healthcare system with their professional and facility details.  
**Preconditions:**

* Midwife is employed at a registered healthcare facility.
* Required details (name, institution, location) are available.  
  **Steps:**

1. System prompts for midwife’s personal details (name).
2. System captures facility information (institution, facility type, district, region).
3. System records service capabilities (delivery, transfusion, EOC services).
4. System confirms successful registration.  
   **Postconditions:**

* Midwife is registered and available for assignment to patients.

### **Use Case 10: Assign a Midwife to a Pregnant Mother**

**Actor:** Healthcare Coordinator  
**Description:** A midwife is assigned to oversee a mother’s antenatal care.  
**Preconditions:**

* Both mother and midwife are registered in the system.
* Midwife operates in the same region/district as the mother.  
  **Steps:**

1. System retrieves mother’s record (location, risk factors).
2. System suggests available midwives based on proximity and services offered.
3. Coordinator assigns the midwife.
4. System updates mother’s record with the assigned midwife.  
   **Postconditions:**

* Mother’s antenatal care is linked to the midwife.

### **Use Case 11: Update Midwife’s Service Capabilities**

**Actor:** Healthcare Administrator  
**Description:** A midwife’s service offerings (e.g., delivery, transfusion) are updated.  
**Preconditions:**

* Midwife is registered.
* Facility upgrades or policy changes affect services.  
  **Steps:**

1. System retrieves midwife’s record.
2. Administrator updates service flags (e.g., conductsDelivery, transfusionServices).
3. System validates and saves changes.  
   **Postconditions:**

* Midwife’s profile reflects current capabilities.

### **Use Case 12: Search for Midwives by Location/Services**

**Actor:** Healthcare Coordinator  
**Description:** The system filters midwives based on location or services needed.  
**Preconditions:**

* Midwives are registered.  
  **Steps:**

1. Coordinator inputs search criteria (district, EOC services, etc.).
2. System returns matching midwives.
3. Coordinator selects a midwife for assignment or review.  
   **Postconditions:**

* Coordinator can make informed staffing decisions.

### **Use Case 13: Verify Facility Resources (OTR Corner, Transfusion)**

**Actor:** Midwife / Supervisor  
**Description:** A midwife or supervisor checks if a facility has critical resources.  
**Preconditions:**

* Midwife’s facility details are recorded.  
  **Steps:**

1. System displays midwife’s facility profile.
2. User verifies otrCorner or transfusionServices status.
3. System highlights limitations (e.g., "No transfusion services—referral needed").  
   **Postconditions:**

* Care plans are adjusted based on available resources.

### **Use Case 14: Plan Emergency Referral Based on Midwife’s Capacity**

**Actor:** Midwife  
**Description:** A midwife determines if a high-risk mother needs referral due to facility limitations.  
**Preconditions:**

* Mother requires emergency care (e.g., hemorrhage).
* Midwife’s eocServices and transfusionServices are known.  
  **Steps:**

1. Midwife checks facility capabilities in the system.
2. If services are unavailable, system suggests nearby facilities with resources.
3. Midwife initiates referral.  
   **Postconditions:**

* Mother is transferred to an appropriate facility.

### **Use Case 15: Generate Midwife Workforce Report**

**Actor:** Healthcare Administrator  
**Description:** The system generates a report on midwife distribution and services.  
**Preconditions:**

* Midwives are registered with location/service data.  
  **Steps:**

1. System compiles midwives by region/district.
2. Report highlights gaps (e.g., "No transfusion services in District X").
3. Administrator uses data for resource allocation.  
   **Postconditions:**

* Informed decisions improve maternal care coverage.

### **Use Case 16: Update Midwife’s Facility or Location**

**Actor:** System Administrator  
**Description:** A midwife’s assigned facility or region is updated (e.g., after transfer).  
**Preconditions:**

* Midwife exists in the system.
* New facility details are valid.  
  **Steps:**

1. Administrator retrieves midwife’s record.
2. Updates institution, district, or region.
3. System validates and saves changes.  
   **Postconditions:**

* Midwife’s profile reflects current workplace.