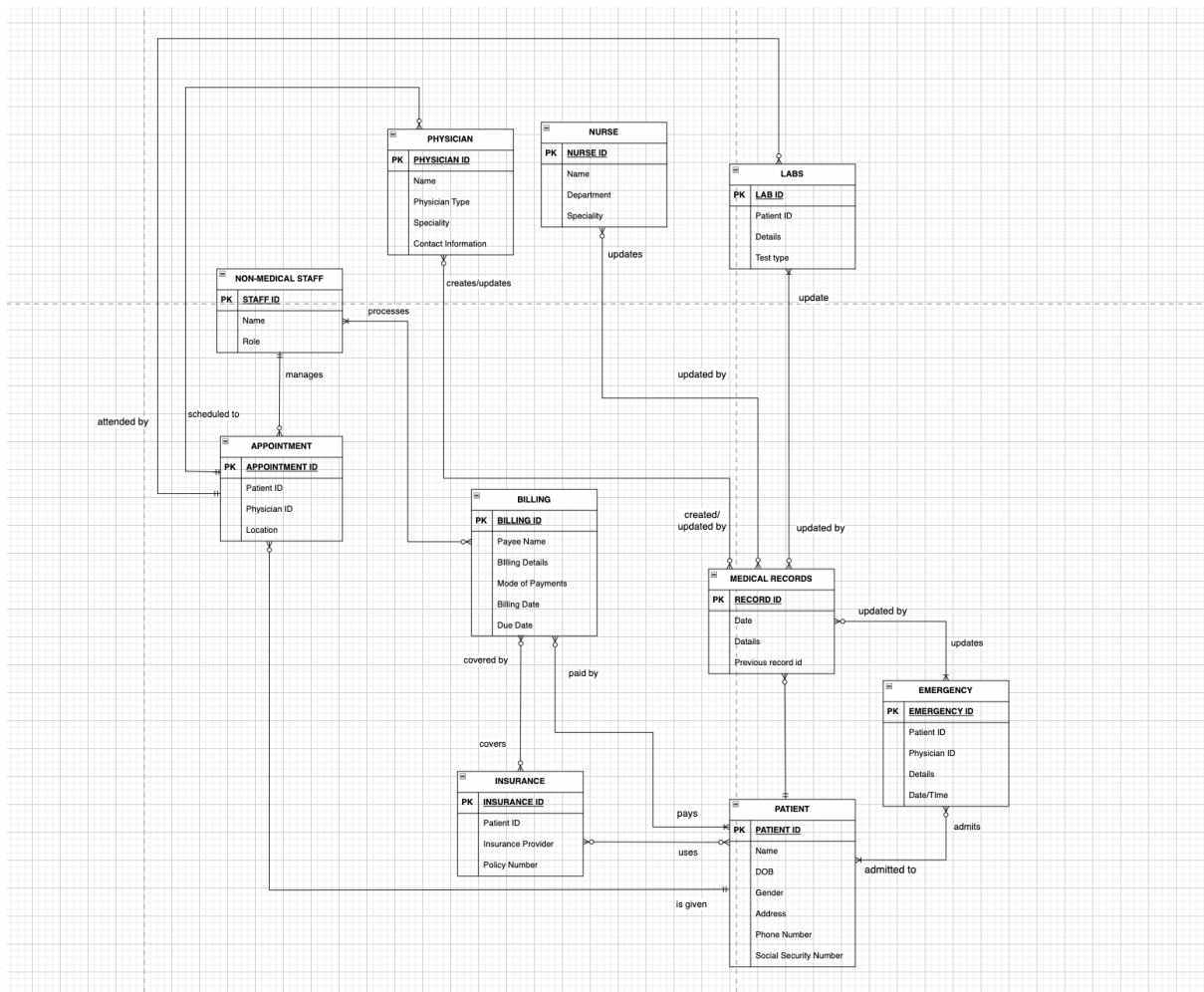


## DMDD P2: DATABASE DESIGN, CONCEPTUAL MODEL



### Definition of Entities:

#### Physicians:

- Licensed and trained healthcare professionals that practice medicine and perform medical procedures.
- Attends many patients via appointments.
- Has access to many Patients medical records.

#### Medical Records:

- Includes details about the medical history of the patient. Details include past illness, allergies, etc.
- Patients may have 0 or 1 medical records which is then filled in by the physician and the lab staff.

#### Appointments:

- This is the time slot allotted to the patients for meeting the physician.
- A patient might have 0 or 1 scheduled appointments.

#### Non-Medical Staff:

- Employees who do not provide medical consultation but are involved in clerical, administrative and managerial tasks.
- Overlook 0 or many billing of patients.
- Book 0 or many appointments.

#### Patients:

- A person who is suffering from a medical condition and needs consultation/treatment from a healthcare provider.
- A patient has an insurance or pays through personal funds.
- A patient has a medical history.

#### Billing:

- Invoices/Bill generated for the patient in exchange for the treatment/ consultation provided.
- Non-medical staff overlooks the billing of a patient.
- Includes payment via insurance and personal funds.

#### Insurance:

- Contracts between an insurance company a patient which ensures monetary medical coverage for that patient.
- A patient may or may not have an insurance.
- Billing/payment might or might not be made through an insurance.

#### Nurse:

- Healthcare professionals who monitor patients' medications, condition and assist the physicians.

#### Labs:

- Facilities that conduct medical tests and provide a patient diagnosis to the physician.

#### Emergency:

- Situations when a patient requires immediate medical treatment and an appointment won't work.

#### **Business Rules:**

- 1) Patients, Physician, Labs, Nurses create and update medical Records.
- 2) Non-medical staff gives appointments to patient one at a time to Physicians or Labs.
- 3) Non-medical staff also manages the Billing Process.
- 4) Billing can be done by personal funds or insurance or both.
- 5) Patient can have many lab appointments but only one doctor can be appointed at a time.

- 6) Patient is admitted to Emergency Room, Information is updated in medical record via responsible Physician or Nurse.
- 7) Medical Records provide all medical information of the Patient.
- 8) Medical records can be accessed by the patient's primary physician, specialists, nurses and labs selectively so easy transfer of patient's information is possible.