

# **Healthcare Management System**

## **Team Members**

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## **Background**

Due to today's fast-paced lifestyle, people are constantly on the move, whether they are moving or traveling. This makes it challenging for them to retain and carry physical medical records, which prevents them from receiving the best healthcare. In this approach, the diagnosis-treatment process can be accelerated and made more effective for hospitals, doctors, and patients by enabling remote and on-demand access to patient information.

## **Aim**

"To provide the most effective and flexible access to healthcare records using database management systems in order to inspire and contribute to health and well-being."

## **Objectives**

1. Every hospital and clinician in the globe will have access to all patient data (including previous medical records) through a centralized system.
2. In addition to the necessity for physical medical records being eliminated, patients would still have access to their records.
3. Using a passport-linked unique identifier to gain access to a patient's medical records.
4. Doctors have rapid access to a patient's medical history in urgent situations.
5. In the event of an emergency, the emergency contact should be informed.

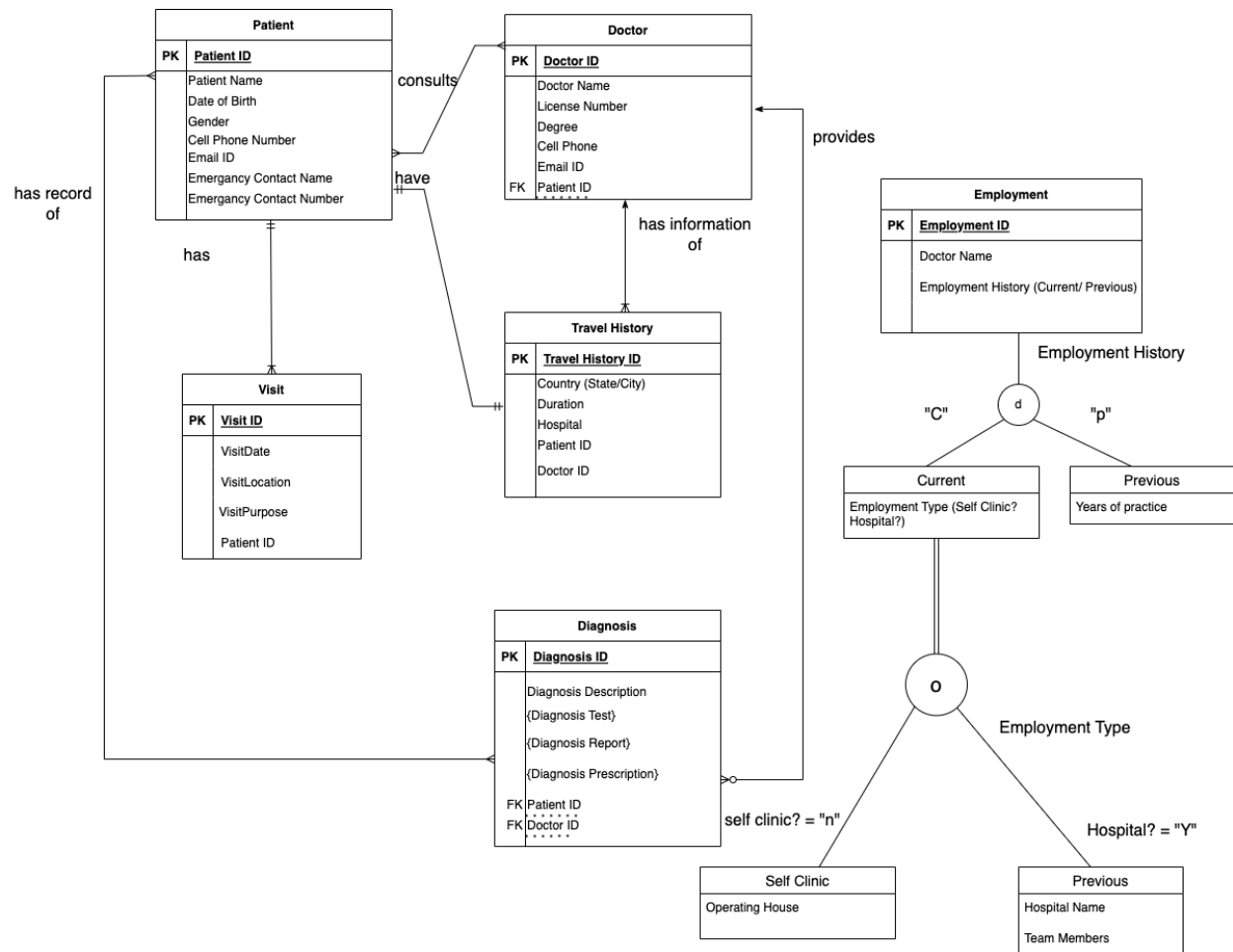
## **List of entities**

- Patient
- Doctor
- Visit – Associative Entity
- Diagnosis
- Employment – Associative Entity
- Healthcare Facility
- Test
- Consists of – Associative Entity
- Drug
- Prescribed – Associative Entity

## **Business Problem**

1. Patient medical records are stored in physical files, creating challenges for patients to store and maintain all records.
2. Neither the patient nor the doctor can access the patient's past records when moving home (or even for a short trip). Because we can't physically carry all the files, including medical records.
3. Patient medical records are stored in physical files, so in the event of an emergency, doctors do not have sufficient information about a patient's past medical records.

## Entity Relationship Diagram



1. There is a many-to-many relationship between Patients and Physicians, the entity named "Visit" in the original ERD is transformed into a related entity with Patient ID, Physician ID, and Facility ID as foreign keys.
2. Diagnostic tests are multi-valued attributes and have been converted to related entities. H. A "consists of" is created and a new entity named "Test" is created with the test ID as the primary key and the test name as a non-key attribute.
3. Changes were made to the Employment entity by removing the subtype and supertype hierarchies.
4. Employment is a many-to-many relationship, so it acts as an associative entity between medical facilities and physicians.

## SQL Statements

### 1. Insurance Table

```
CREATE DATABASE Healthcare_Management
USE Healthcare_Management
GO

CREATE TABLE Insurance(
    Insurance_ID int NOT NULL,
    Provider_Name varchar(55) NOT NULL,
    Insurance_Type varchar(55),

    CONSTRAINT Insurance_PK PRIMARY KEY (Insurance_ID)
)

/*INSERT INTO STATEMENTS*/

/*INSURANCE - HMO PPO HSA POS FEE FOR SERVICE*/

INSERT INTO Insurance
VALUES
(1,'Cigna','HMO'),
(2,'Humana','PPO'),
(3,'United Healthcare','HMO'),
(4,'Kaiser Permanente','POS'),
(5,'Elevance Health','HSA'),
(6,'Aetna','HMO'),
(7,'Centne Corp','Fee for Service'),
(8,'Molina Healthcare','POS'),
(9,'HCSC','Fee for Service'),
(10,'Aflac','PPO')
```

	Insurance_ID	Provider_Name	Insurance_Type
1	1	Cigna	HMO
2	2	Humana	PPO
3	3	United Healthcare	HMO
4	4	Kaiser Permanente	POS
5	5	Elevance Health	HSA
6	6	Aetna	HMO
7	7	Centne Corp	Fee for Service
8	8	Molina Healthcare	POS
9	9	HCSC	Fee for Service
10	10	Aflac	PPO

## 2. Patient Table

```
CREATE TABLE Patient(
    Patient_ID int NOT NULL,
    Patient_Name varchar(30) NOT NULL,
    Date_Of_Birth Date NOT NULL,
    Phone_Number nvarchar(15) NOT NULL,
    Email_ID nvarchar(50) NOT NULL,
    Insurance_ID int NOT NULL,
    Insurance_Exp_Date DATE,

    /*Patient Address*/
    Street nvarchar(100) NOT NULL,
    City varchar(100) NOT NULL,
    [State] varchar(100) NOT NULL,
    Zip_code nvarchar(50) NOT NULL,
    Country nvarchar(50) NOT NULL,

    /*Place of Birth*/
    Country_of_Origin varchar(100) NOT NULL,

    /*Emergency Information*/
    Emergency_Contact_Name varchar(100) NOT NULL,
    Emergency_Contact_Number nvarchar(20) NOT NULL,

    /*Table Check Constraint for Gender*/
    Gender varchar(10)
        CONSTRAINT Gender_Chk CHECK (Gender IN ('Male','Female','Non-Binary'))

    CONSTRAINT Patient_PK PRIMARY KEY (Patient_ID)
    CONSTRAINT Patient_FK FOREIGN KEY (Insurance_ID)
        references Insurance(Insurance_ID),
)
```

```
INSERT INTO Patient ([Patient_ID],[Patient_Name],[Date_Of_Birth],[Phone_Number],[Email_ID],[Insurance_ID],[Street],[City],[State],[Zip_code],
VALUES
(3,'John Smith','1995-08-03','+18577891237','john.smith@bingo.com',3,'Park Street','Boston','MA','02125','USA','Germany','Alexis Bledell','+494
(7,'Mark Kelter','1992-12-04','+17798453265','mark.kelter@go.com',7,'Charles Court','Dallas','TX','03217','USA','France','Jessica Cooper','+336
(5,'Peter Mcdonald','1985-11-09','+15632768980','Peter.mcdonald@right.com',4,'Russell Street','San Fransico','CA','01013','USA','Italy','Robin
(8,'Roy Bing','1992-09-02','+449645783241','Roy.bing@click.com',8,'Abbey Road','London','ENG','21987','UK','UK','Emma Watson','+442365765875','
(2,'Julie Geller','1993-03-23','+335633421768','julie.geller@check.com',1,'Michigan Ave','Paris','France',31674,'EU','Ireland','Natalie Portm
(10,'Ronie Jones','1999-08-21','+333489765129','ronie.jones@bingo.com',2,'Roger Drive','Nice','France',32895,'EU','USA','Lake Bell','+1097865
(4,'Justin Timberlake','1998-07-31','+13497604512','justin.timberlake@right.com',10,'Main Street','Binghamton','NYU','05097','USA','USA','Emma
(9,'Jhanvi Shetty','1999-10-13','+917967293675','jhanvi.shetty@go.com',5,'Thakur Village','Kandivali','MH','400101','India','India','Mahi Rane'
(1,'Rick Johnson','1987-06-30','+918878265437','rick.johnson@bingo.com',9,'Borivali','Mumbai','MH','400123','INDIA','USA','Mila Kunis','+165783
(6,'Rishi Kumar','1998-10-21','+19870138588','rishi.kumar@check.com',6,'Roxbury','Boston','MA','02120','USA','India','Priya Singh','+9124637489
```

	Patient_ID	Patient_Name	Date_Of_Birth	Phone_Number	Email_ID	Insurance_ID	Insurance_Exp_Date	Street	City	State	Zip_code	Country	Country_of_Origin	Emergency_Contact_Name	Emergency_Contact_Number
1	1	Rick Johnson	1987-06-30	+918878265437	rick.johnson@bingo.com	9	2028-04-05	Borivali	Mumbai	MH	400123	USA	INDIA	Mila Kunis	+1657
2	2	Julie Geller	1993-03-23	+335633421768	julie.geller@check.com	1	2026-04-13	Michi...	Paris	Fra...	31674	Ireland	EU	Natalie Portman	+3534
3	3	John Smith	1995-08-03	+18577891237	john.smith@bingo.com	3	2025-03-22	Park ...	Boston	MA	2125	Gem...	USA	Alexis Bledell	+4945
4	4	Justin Timbe...	1998-07-31	+13497604512	justin.timberlake@right...	10	2029-01-19	Main ...	Bingh...	NYU	5097	USA	USA	Emma Stone	+1569
5	5	Peter Mcdon...	1985-11-09	+15632768980	Peter.mcdonald@right...	4	2029-12-21	Russ...	San F...	CA	1013	Italy	USA	Robin Jackson	+3989
6	6	Rishi Kumar	1998-10-21	+19870138588	rishi.kumar@check.com	6	2031-11-04	Roxb...	Boston	MA	2120	India	USA	Priya Singh	+9124
7	7	Mark Kelter	1992-12-04	+17798453265	mark.kelter@go.com	7	2027-06-01	Charl...	Dallas	TX	3217	France	USA	Jessica Cooper	+3369
8	8	Roy Bing	1992-09-02	+449645783241	Roy.bing@click.com	8	2021-05-02	Abbey R...	London	ENG	21987	UK	UK	Emma Watson	+442365765875

### 3. Doctor Table

```

CREATE TABLE Doctor(
    Doctor_ID int NOT NULL,
    Doctor_Name varchar(55) NOT NULL,
    Date_Of_Birth Date NOT NULL,
    Phone_Number nvarchar(15) NOT NULL,
    Email_ID nvarchar(50) NOT NULL,
    Gender varchar(10)
    CONSTRAINT Doctor_Gender_Chk CHECK (Gender IN ('Male','Female','Non-Binary')) ,
    License_Number nvarchar(20) NOT NULL,
    License_Expiration_Date Date NOT NULL,
    Degree nvarchar(50) NOT NULL
    CONSTRAINT Doctor_PK PRIMARY KEY (Doctor_ID),
    [Status] varchar(20) NULL
)

INSERT INTO Doctor([Doctor_ID],[Doctor_Name],[Date_Of_Birth],[Phone_Number],[Email_ID],[Gender],[License_Number],[License_Expiration_Date]
VALUES
(1,'John Marshall','1978-02-01',9872123421,'marshall_j@gmail.com','Male','CAR1232','2020-02-01','MBBS'),
(2,'Maria Dmello','1965-10-02',8572212123,'maria_Dmello21@gmail.com','Female','DMD2351','2023-10-02','DMD'),
(3,'Quincy Joseph','1989-12-14',8892342143,'sweetquincy_42@gmail.com','Female','DCM2021','2022-12-02','DCM'),
(4,'Chin Yen','1998-11-26',7672321123,'chen.yen@gmail.com','Male','MD2301','2013-11-02','MD'),
(5,'Mike Pearl','1968-06-12',8098213412,'pearl_m@gmail.com','Male','DMD2211','2025-10-15','DMD'),
(6,'Green Field','1962-04-13',6521234212,'field.green@gmail.com','Female','DCD9051','2026-10-02','DCM'),
(7,'Paul Dewane','1965-05-14',3399997791,'paulDewane42@gmail.com','Male','CAR2351','2020-11-02','MBBS'),
(8,'Plank Oto','1965-06-15',3682135276,'otoPlank21@gmail.com','Non-Binary','DMD1022','2024-04-02','DMD'),
(9,'Parthiv Patel','1965-07-16',8542134651,'PPatel1965@gmail.com','Male','MD5063','2026-11-02','MD'),
(10,'Manuel Ani','1965-11-18',9821233212,'Ani_Manuel6205@gmail.com','Male','DMD0321','2023-10-02','DMD')

```

	Doctor_ID	Doctor_Name	Date_Of_Birth	Phone_Number	Email_ID	Gender	License_Number	License_Expiration_Date	Degree	Status
1	1	John Marshall	1978-02-01	9872123421	marshall_j@gmail.com	Male	CAR1232	2020-02-01	MBBS	NULL
2	2	Maria Dmello	1965-10-02	8572212123	maria_Dmello21@gmail.com	Female	DMD2351	2023-10-02	DMD	NULL
3	3	Quincy Joseph	1989-12-14	8892342143	sweetquincy_42@gmail.com	Female	DCM2021	2022-12-02	DCM	NULL
4	4	Chin Yen	1998-11-26	7672321123	chen.yen@gmail.com	Male	MD2301	2013-11-02	MD	NULL
5	5	Mike Pearl	1968-06-12	8098213412	pearl_m@gmail.com	Male	DMD2211	2025-10-15	DMD	NULL
6	6	Green Field	1962-04-13	6521234212	field.green@gmail.com	Female	DCD9051	2026-10-02	DCM	NULL
7	7	Paul Dewane	1965-05-14	3399997791	paulDewane42@gmail.com	Male	CAR2351	2020-11-02	MBBS	NULL
8	8	Plank Oto	1965-06-15	3682135276	otoPlank21@gmail.com	Non-Binary	DMD1022	2024-04-02	DMD	NULL
9	9	Parthiv Patel	1965-07-16	8542134651	PPatel1965@gmail.com	Male	MD5063	2026-11-02	MD	NULL
10	10	Manuel Ani	1965-11-18	9821233212	Ani_Manuel6205@gmail.c...	Male	DMD0321	2023-10-02	DMD	NULL



#### 4. Healthcare Facility Table

```

CREATE TABLE Healthcare_Facility(
    Facility_ID INT IDENTITY (1,1) NOT NULL,
    Facility_Name nvarchar(100) NOT NULL,
    Facility_Category varchar(30) NOT NULL
        CONSTRAINT Facility_Category_Chk CHECK (Facility_Category IN ('Clinic','Hospital')),
    City varchar(100) NOT NULL,
    [State] varchar(100) NOT NULL,
    Zip_code nvarchar(50) NOT NULL,
    Country varchar(100) NOT NULL,
    CONSTRAINT Healthcare_Facility_PK PRIMARY KEY (Facility_ID)
)

/*HEALTHCARE FACILITY*/
Insert into Healthcare_Facility
VALUES
('Brigham and Womens Hospital','Hospital','Boston','MA',02115,'USA'),
('Nanavati Hospital','Hospital','Mumbai','MH',400052,'India'),
('Childcare','Clinic','London','LN',10210,'UK'),
('Wondercare','Hospital','Paris','FR',2698,'Europe'),
('Mayo Clinic','Clinic','Italy','FR',31569,'Europe'),
('Toronto General Hospital','Hospital','Toronto','CN',9860,'USA'),
('UMC Utrecht','Hospital','Copenhagen','NH',7456,'Denmark'),
('Royal Melbourne Hospital','Hospital','Melbourn','AU',6542,'Australia'),
('National University Hospital','Hospital','Singapore','SG',789,'Singapore'),
('Grande Ospedale Metropolitano Niguarda','Clinic','Milan','FR',9874,'Europe')

```

	Facility_ID	Facility_Name	Facility_Category	City	State	Zip_code	Country
1	1	Brigham and Womens Hospital	Hospital	Boston	MA	2115	USA
2	2	Nanavati Hospital	Hospital	Mumbai	MH	400052	India
3	3	Childcare	Clinic	London	LN	10210	UK
4	4	Wondercare	Hospital	Paris	FR	2698	Europe
5	5	Mayo Clinic	Clinic	Italy	FR	31569	Europe
6	6	Toronto General Hospital	Hospital	Toronto	CN	9860	USA
7	7	UMC Utrecht	Hospital	Copenhagen	NH	7456	Denmark
8	8	Royal Melbourne Hospital	Hospital	Melbourn	AU	6542	Australia
9	9	National University Hospital	Hospital	Singapore	SG	789	Singapore
10	10	Grande Ospedale Metropolitano Niguarda	Clinic	Milan	FR	9874	Europe

## 5. Employment Table

```
CREATE TABLE Employment (  
    Employment_ID int IDENTITY(1,1) UNIQUE NOT NULL,  
    Emp_Start_Date Date NOT NULL,  
    Emp_End_Date Date,  
    Facility_ID INT NOT NULL,  
    Doctor_ID INT NOT NULL,  
  
    CONSTRAINT Employment_PK PRIMARY KEY (Employment_ID),  
    CONSTRAINT Employment_FK1 FOREIGN KEY (Facility_ID) REFERENCES [Healthcare_Facility] (Facility_ID),  
    CONSTRAINT Employment_FK2 FOREIGN KEY (Doctor_ID) REFERENCES [Doctor] (Doctor_ID)  
)  
  
/*EMPLOYMENT*/  
  
INSERT into Employment (Emp_Start_Date, Facility_ID, Doctor_ID)  
VALUES  
    ('2012-02-12', 1, 1),  
    ('2021-03-24', 2, 2),  
    ('2022-06-10', 3, 3),  
    ('2001-07-09', 4, 4),  
    ('2018-10-30', 5, 5)  
  
INSERT into Employment (Emp_Start_Date, Emp_End_Date, Facility_ID, Doctor_ID)  
VALUES  
    ('2012-09-12', '2024-09-12', 6, 6),  
    ('2012-11-12', '2028-12-01', 7, 7),  
    ('2012-12-12', '2023-05-06', 8, 8),  
    ('2006-01-15', '2026-01-12', 9, 9),  
    ('2000-11-24', '2027-11-28', 10, 10)
```

	Employment_ID	Emp_Start_Date	Emp_End_Date	Facility_ID	Doctor_ID
1	1	2012-02-12	NULL	1	1
2	2	2021-03-24	NULL	2	2
3	3	2022-06-10	NULL	3	3
4	4	2001-07-09	NULL	4	4
5	5	2018-10-30	NULL	5	5
6	6	2012-09-12	2024-09-12	6	6
7	7	2012-11-12	2028-12-01	7	7
8	8	2012-12-12	2023-05-06	8	8
9	9	2006-01-15	2026-01-12	9	9
10	10	2000-11-24	2027-11-28	10	10



## 6. Diagnosis Table

```
CREATE TABLE Diagnosis (  
    Diagnosis_ID int UNIQUE NOT NULL,  
    Symptom varchar(150) NOT NULL,  
    Treatment varchar(150) NOT NULL,  
    Severity varchar(20)  
        CONSTRAINT Severity_Chk CHECK (Severity IN ('High','Mid','Low')),  
        CONSTRAINT Diagnosis_PK PRIMARY KEY (Diagnosis_ID)  
);  
  
/*DIAGNOSIS*/  
  
INSERT INTO Diagnosis  
VALUES  
(1, 'Chest Pain','Rest at home with antibiotics','Low'),  
(2, 'Back Pain','Rest at home with antibiotics','Mid'),  
(3, 'Chest Pain','Rest at home with antibiotics','Low'),  
(4, 'Blurry vision','diabetes medication or insulin therapy','High'),  
(5, 'Fever','Rest and drink plenty of fluids','High'),  
(6, 'Varicose veins','Sclerotherapy','Low'),  
(7, 'Headache','Antibiotics','Mid'),  
(8, 'Nosebleeds','heart-healthy diet with less salt with medicines','High'),  
(9, 'Back Pain','Rest at home','High'),  
(10, 'Fever','Rest and drink plenty of fluids','Low'),  
(11, 'Headache','Antibiotics','High'),  
(12, 'Blurry vision','diabetes medication or insulin therapy','Mid'),  
(13, 'Fever','Rest and drink plenty of fluids','Low'),  
(14, 'Back Pain','Rest at home with antibiotics','High'),  
(15, 'Chest Pain','Rest at home with antibiotics','Mid'),  
(16, 'Varicose veins','Sclerotherapy','High'),  
(17, 'Varicose veins','Sclerotherapy','Low'),  
(18, 'Nosebleeds','heart-healthy diet with less salt with medicines','Mid'),  
(19, 'Chest Pain','Rest at home with antibiotics','High'),  
(20, 'Fever','Rest and drink plenty of fluids','Mid'),  
(21, 'Back Pain','Rest at home with antibiotics','Low'),  
(22, 'Headache','Antibiotics','Low'),  
(23, 'Fever','Rest and drink plenty of fluids','Mid'),  
(24, 'Blurry vision','diabetes medication or insulin therapy','High'),  
(25, 'Varicose veins','Sclerotherapy','Mid'),  
(26, 'Blurry vision','diabetes medication or insulin therapy','Low'),  
(27, 'Fever','Rest and drink plenty of fluids','Mid'),  
(28, 'Nosebleeds','heart-healthy diet with less salt with medicines','High').
```

	Diagnosis_ID	Symptom	Treatment	Severity
1	1	Chest Pain	Rest at home with antibiotics	High
2	2	Back Pain	Rest at home with antibiotics	Mid
3	3	Chest Pain	Rest at home with antibiotics	Low
4	4	Blurry vision	diabetes medication or insulin therapy	High
5	5	Fever	Rest and drink plenty of fluids	High
6	6	Varicose veins	Sclerotherapy	Low
7	7	Headache	Antibiotics	Mid
8	8	Nosebleeds	heart-healthy diet with less salt with medicines	High
9	9	Back Pain	Rest at home	High
10	10	Fever	Rest and drink plenty of fluids	Low
11	11	Headache	Antibiotics	High
12	12	Blurry vision	diabetes medication or insulin therapy	Mid
13	13	Fever	Rest and drink plenty of fluids	Low
14	14	Back Pain	Rest at home with antibiotics	High
15	15	Chest Pain	Rest at home with antibiotics	Mid
16	16	Varicose veins	Sclerotherapy	High
17	17	Varicose veins	Sclerotherapy	Low
18	18	Nosebleeds	heart-healthy diet with less salt with medicines	Mid
19	19	Chest Pain	Rest at home with antibiotics	High
20	20	Fever	Rest and drink plenty of fluids	Mid
21	21	Back Pain	Rest at home with antibiotics	Low
22	22	Headache	Antibiotics	Low
23	23	Fever	Rest and drink plenty of fluids	Mid
24	24	Blurry vision	diabetes medication or insulin therapy	High
25	25	Varicose veins	Sclerotherapy	Mid
26	26	Blurry vision	diabetes medication or insulin therapy	Low
27	27	Fever	Rest and drink plenty of fluids	Mid

## 7. Visit Table

```
CREATE TABLE Visit (
    Visit_ID INT IDENTITY(1,1) UNIQUE NOT NULL,
    Visit_Date Date NOT NULL,
    Purpose varchar(100) NOT NULL,
    Patient_ID INT NOT NULL,
    Doctor_ID INT NOT NULL,
    Facility_ID INT NOT NULL,
    Diagnosis_ID int NOT NULL,

    CONSTRAINT Visit_PK PRIMARY KEY (Visit_ID),
    CONSTRAINT Visit_FK1 FOREIGN KEY (Patient_ID) REFERENCES [Patient] (Patient_ID),
    CONSTRAINT Visit_FK2 FOREIGN KEY (Doctor_ID) REFERENCES [Doctor] (Doctor_ID),
    CONSTRAINT Visit_FK3 FOREIGN KEY (Facility_ID) REFERENCES [Healthcare_Facility] (Facility_ID),
    CONSTRAINT Visit_FK4 FOREIGN KEY (Diagnosis_ID) REFERENCES [Diagnosis] (Diagnosis_ID)
)
```

/\*VISIT\*/

```
INSERT INTO Visit
VALUES
```

```
('2022-02-11', 'Cough', 2, 9, 7, 3),
('2022-02-11', 'Back Pain', 4, 10, 3, 2),
('2022-03-20', 'Fever', 1, 8, 4, 5),
('2022-04-27', 'Pneumonia', 3, 5, 8, 1),
('2022-03-20', 'Diabetes', 7, 2, 10, 4),
('2022-01-07', 'Leg Symptoms', 6, 7, 5, 6),
('2022-06-01', 'Headache', 10, 1, 6, 7),
('2022-06-01', 'Hypertension', 9, 3, 1, 8),
('2022-12-15', 'Fever', 8, 4, 2, 10),
('2022-05-13', 'Back Pain', 5, 6, 9, 9),
('2022-05-13', 'Headache', 9, 7, 10, 11),
('2022-09-30', 'Diabetes', 1, 9, 8, 12),
('2022-12-12', 'Fever', 3, 1, 5, 13),
('2022-12-12', 'Back Pain', 5, 3, 1, 14),
('2022-12-12', 'Pneumonia', 7, 4, 2, 15).
```

	Visit_ID	Visit_Date	Purpose	Patient_ID	Doctor_ID	Facility_ID	Diagnosis_ID
1	1	2022-02-11	Cough	2	9	7	3
2	2	2022-02-11	Back Pain	4	10	3	2
3	3	2022-03-20	Fever	1	8	4	5
4	4	2022-04-27	Pneumonia	3	5	8	1
5	5	2022-03-20	Diabetes	7	2	10	4
6	6	2022-01-07	Leg Symptoms	6	7	5	6
7	7	2022-06-01	Headache	10	1	6	7
8	8	2022-06-01	Hypertension	9	3	1	8
9	9	2022-12-15	Fever	8	4	2	10
10	10	2022-05-13	Back Pain	5	6	9	9
11	11	2022-05-13	Headache	9	7	10	11
12	12	2022-09-30	Diabetes	1	9	8	12
13	13	2022-12-12	Fever	3	1	5	13
14	14	2022-12-12	Back Pain	5	3	1	14
15	15	2022-12-12	Pneumonia	7	4	2	15
16	16	2022-12-12	Leg Symptoms	10	10	6	16
17	17	2022-01-25	Leg Symptoms	8	7	9	17
18	18	2022-03-29	Hypertension	6	2	4	18
19	19	2022-04-02	Cough	4	8	3	19
20	20	2022-05-21	Fever	2	6	1	20
21	21	2022-12-28	Back Pain	2	5	7	21
22	22	2022-04-19	Headache	6	7	1	22
23	23	2022-04-19	Pneumonia	5	1	8	23
24	24	2022-06-13	Diabetes	6	8	2	24
25	25	2022-06-13	Leg Symptoms	9	10	9	25
26	26	2022-11-15	Diabetes	1	1	10	26
27	27	2022-08-02	Fever	9	3	7	27



## 8. Test Table

```

CREATE TABLE Test(
    Test_ID int IDENTITY (1,1) NOT NULL,
    Test_Name varchar(100) NOT NULL,
    Test_Category varchar(100) NOT NULL
        CONSTRAINT Test_Category_Chk CHECK (Test_Category IN ('Blood Test','X-Ray','Sonography','Covid Test')),
    Test_Provider varchar(100) NOT NULL
        CONSTRAINT Test_PK PRIMARY KEY (Test_ID),
)

INSERT INTO Test
VALUES
('C-reactive protein (CRP)','Blood Test','Suburban'),
('Tissue transglutaminase IgA, IgG','Blood Test','Apple Clinic'),
('lipid panel (cholesterol test)','Blood Test','Nemours'),
('Hepatic (liver) function panel','Sonography','BWH'),
('IGF binding protein-3 (IGFBP-3)','X-Ray','Common Wealth'),
('Bone membrane','X-Ray','BWH'),
('Covid-19','Covid Test','Sam Diagnostics'),
('Testosterone','Blood Test','Tamco Diagnostics'),
('lactate dehydrogenase (LDH)','Blood Test','Testguide'),
('T3 total (triiodothyronine)','Blood Test','BWH'),
('Chest Xray','X-Ray','Sam Diagnostics'),
('EEG','Sonography','Mayo Clinic'),
('CT-Scan','Sonography','Suburban')

```

	Test_ID	Test_Name	Test_Category	Test_Provider
1	1	C-reactive protein (CRP)	Blood Test	Suburban
2	2	Tissue transglutaminase IgA, IgG	Blood Test	Apple Clinic
3	3	lipid panel (cholesterol test)	Blood Test	Nemours
4	4	Hepatic (liver) function panel	Sonography	BWH
5	5	IGF binding protein-3 (IGFBP-3)	X-Ray	Common Wealth
6	6	Bone membrane	X-Ray	BWH
7	7	Covid-19	Covid Test	Sam Diagnostics
8	8	Testosterone	Blood Test	Tamco Diagnostics
9	9	lactate dehydrogenase (LDH)	Blood Test	Testguide
10	10	T3 total (triiodothyronine)	Blood Test	BWH
11	11	Chest Xray	X-Ray	Sam Diagnostics
12	12	EEG	Sonography	Mayo Clinic
13	13	CT-Scan	Sonography	Suburban

## 9. Report Table

```
CREATE TABLE Report(  
    Report_ID int IDENTITY (1,1) NOT NULL,  
    Results nvarchar(120) NOT NULL,  
    Report_Date Date NOT NULL,  
    Diagnosis_ID INT NOT NULL,  
    Test_ID INT NOT NULL,  
  
    CONSTRAINT Report_PK PRIMARY KEY (Report_ID),  
    CONSTRAINT Report_FK1 FOREIGN KEY (Diagnosis_ID) REFERENCES [Diagnosis](Diagnosis_ID),  
    CONSTRAINT Report_FK2 FOREIGN KEY (Test_ID) REFERENCES [Test](Test_ID),  
)  
  
INSERT INTO Report ([Results],[Report_Date],[Diagnosis_ID],[Test_ID])  
VALUES  
(  
    ('Positive','2022-04-29',1,11),  
    ('Negative','2022-02-15',2,6),  
    ('Positive','2022-02-14',3,11),  
    ('Negative','2022-03-22',4,3),  
    ('Positive','2022-03-22',5,7),  
    ('Negative','2022-01-09',6,6),  
    ('Positive','2022-06-02',7,13),  
    ('Negative','2022-06-03',8,12),  
    ('Positive','2022-05-15',9,6),  
    ('Negative','2022-12-17',10,6),  
    ('Negative','2022-05-15',11,13),  
    ('Negative','2022-10-01',12,3),  
    ('Positive','2022-12-15',13,7),  
    ('Negative','2022-12-15',14,6),  
    ('Positive','2022-12-16',15,11),  
    ('Positive','2022-12-17',16,6),  
    ('Negative','2022-01-27',17,6),  
    ('Positive','2022-03-30',18,12),  
    ('Positive','2022-04-04',19,11),  
    ('Positive','2022-05-23',20,7),  
    ('Negative','2022-12-30',21,6),  
    ('Negative','2022-04-21',22,13)
```

	Report_ID	Results	Report_Date	Diagnosis_ID	Test_ID
1	1	Positive	2022-04-29	1	11
2	2	Negative	2022-02-15	2	6
3	3	Positive	2022-02-14	3	11
4	4	Negative	2022-03-22	4	3
5	5	Positive	2022-03-22	5	7
6	6	Negative	2022-01-09	6	6
7	7	Positive	2022-06-02	7	13
8	8	Negative	2022-06-03	8	12
9	9	Positive	2022-05-15	9	6
10	10	Negative	2022-12-17	10	6
11	11	Negative	2022-05-15	11	13
12	12	Negative	2022-10-01	12	3
13	13	Positive	2022-12-15	13	7
14	14	Negative	2022-12-15	14	6
15	15	Positive	2022-12-16	15	11
16	16	Positive	2022-12-17	16	6
17	17	Negative	2022-01-27	17	6
18	18	Positive	2022-03-30	18	12
19	19	Positive	2022-04-04	19	11
20	20	Positive	2022-05-23	20	7
21	21	Negative	2022-12-30	21	6
22	22	Negative	2022-04-21	22	13



## 10. Drug Table

```
CREATE TABLE Drug(  
    Drug_ID INT IDENTITY(1,1) NOT NULL,  
    Drug_Name nvarchar(100) NOT NULL,  
    Drug_Manufacturer nvarchar(120) NOT NULL,  
    CONSTRAINT Drug_PK PRIMARY KEY (Drug_ID),  
)  
  
INSERT INTO Drug  
VALUES  
    ('Zestril', 'AstraZeneca'),  
    ('Synthroid', 'AbbVie'),  
    ('Lipitor', 'Viatris'),  
    ('Glucophage', 'Merck'),  
    ('Zocor', 'Merck'),  
    ('Prilosec', 'AstraZeneca'),  
    ('Norvasc', 'Pfizer'),  
    ('Lopressor', 'Novartis Pharmaceuticals.'),  
    ('Ventolin', 'GlaxoSmithKline'),  
    ('Deltasone', 'Par Pharma')
```

	Drug_ID	Drug_Name	Drug_Manufacturer
1	1	Zestril	AstraZeneca
2	2	Synthroid	AbbVie
3	3	Lipitor	Viatris
4	4	Glucophage	Merck
5	5	Zocor	Merck
6	6	Prilosec	AstraZeneca
7	7	Norvasc	Pfizer
8	8	Lopressor	Novartis Pharmaceuticals.
9	9	Ventolin	GlaxoSmithKline
10	10	Deltasone	Par Pharma

## 11. Prescription Table

```
CREATE TABLE Prescription(  
    Prescription_ID int IDENTITY(1,1) NOT NULL,  
    Diagnosis_ID INT NOT NULL,  
    Drug_ID INT NOT NULL,  
    CONSTRAINT Prescription_PK PRIMARY KEY (Prescription_ID),  
    CONSTRAINT Prescription_FK1 FOREIGN KEY (Diagnosis_ID) REFERENCES [Diagnosis](Diagnosis_ID),  
    CONSTRAINT Prescription_FK2 FOREIGN KEY (Drug_ID) REFERENCES [Drug](Drug_ID),  
)  
  
INSERT into Prescription ([Diagnosis_ID],[Drug_ID])  
VALUES  
  
(1,3),  
(2,4),  
(3,2),  
(4,5),  
(5,6),  
(6,7),  
(7,8),  
(8,9),  
(9,10),  
(10,1),  
(11,5),  
(12,9),  
(13,3),  
(14,2),  
(15,7),  
(16,4),  
(17,10),  
(18,1),  
(19,8),  
(20,6),  
(21,3),  
(22,5).
```

	Prescription_ID	Diagnosis_ID	Drug_ID
1	1	1	3
2	2	2	4
3	3	3	2
4	4	4	5
5	5	5	6
6	6	6	7
7	7	7	8
8	8	8	9
9	9	9	10
10	10	10	1
11	11	11	5
12	12	12	9
13	13	13	3
14	14	14	2
15	15	15	7
16	16	16	4
17	17	17	10

## Triggers

### 1. Trigger 'doc\_License\_status'

```
--- Triggers---
CREATE trigger doc_License_status on dbo.Doctor
after insert
as
declare @Exp_date as date
declare @doc_id as int
declare new_status Cursor for Select doctor.Doctor_ID, doctor.License_Expiration_Date from Doctor
open new_status;
Fetch next from new_status into @doc_id, @Exp_date;
while @@Fetch_Status=0
begin
    if(@Exp_date)> GETDATE()
    begin
        update doctor set Status='License Active' where doctor.Doctor_ID=@doc_id;
    end
    if(@Exp_date)< GETDATE()
    begin
        update doctor set Status='License Expired' where doctor.Doctor_ID=@doc_id;
    end
    Fetch next from new_status into @doc_id,@Exp_date;
end
Close new_status
```

### 2. Trigger 'Updated\_Diag'

```
CREATE TRIGGER Updated_Diag
ON dbo.Diagnosis
FOR UPDATE
AS
BEGIN
    IF UPDATE(Severity)
    BEGIN
        INSERT INTO [Updated_Diagnosis](
            [Diagnosis_ID],
            [Symptom],
            [Treatment],
            [Severity],
            [Updated_Severity],
            [ChangeDate])
            SELECT d.Diagnosis_ID
                ,d.Symptom
                ,d.Treatment
                ,d.Severity
                ,i.Severity,
                GETDATE()
            FROM DELETED d JOIN INSERTED i on d.Diagnosis_ID = i.Diagnosis_ID
    END
END
GO
```

## Views

### 1. View for Patient and Encounter

```
--View for Patient and Encounter  
  
CREATE VIEW [AllEncounterHistory]  
AS  
    select p.Patient_Name, v.Visit_Date, v.Purpose, d.Doctor_Name  
    from Patient p  
        JOIN Visit v ON p.Patient_ID = v.Patient_ID  
        JOIN Doctor d ON v.Doctor_ID = d.Doctor_ID  
  
select * from [AllEncounterHistory]
```

	Patient_Name	Visit_Date	Purpose	Doctor_Name
1	Julie Geller	2022-02-11	Cough	Parthiv Patel
2	Justin Timberlake	2022-02-11	Back Pain	Manuel Ani
3	Rick Johnson	2022-03-20	Fever	Plank Oto
4	John Smith	2022-04-27	Pneumo...	Mike Pearl
5	Mark Kelter	2022-03-20	Diabetes	Maria Dmello
6	Rishi Kumar	2022-01-07	Leg Sym...	Paul Dewane
7	Ronie Jones	2022-06-01	Headache	John Marshall
8	Jhanvi Shetty	2022-06-01	Hyperte...	Quincy Jose...
9	Roy Bing	2022-12-15	Fever	Chin Yen
10	Peter Mcdonald	2022-05-13	Back Pain	Green Field
11	Jhanvi Shetty	2022-05-13	Headache	Paul Dewane
12	Rick Johnson	2022-09-30	Diabetes	Parthiv Patel
13	John Smith	2022-12-12	Fever	John Marshall
14	Peter Mcdonald	2022-12-12	Back Pain	Quincy Jose...
15	Mark Kelter	2022-12-12	Pneumo...	Chin Yen
16	Ronie Jones	2022-12-12	Leg Sym...	Manuel Ani
17	Roy Bing	2022-01-25	Leg Sym...	Paul Dewane
18	Rishi Kumar	2022-03-29	Hyperte...	Maria Dmello
19	Justin Timberlake	2022-04-02	Cough	Plank Oto
20	Julie Geller	2022-05-21	Fever	Green Field
21	Julie Geller	2022-12-28	Back Pain	Mike Pearl
22	Rishi Kumar	2022-04-19	Headache	Paul Dewane
23	Peter Mcdonald	2022-04-19	Pneumo...	John Marshall
24	Rishi Kumar	2022-06-13	Diabetes	Plank Oto
25	Jhanvi Shetty	2022-06-13	Leg Sym...	Manuel Ani

## 2. View for Patient, Test and Test Report

```
-- View for Patient, Test and Test Report

CREATE VIEW [AllTestResults]
AS
select DISTINCT p.Patient_Name, p.Patient_ID, v.Purpose, r.Results, t.Test_Name
from Patient p
    JOIN Visit v ON p.Patient_ID = v.Patient_ID
    JOIN Report r ON v.Diagnosis_ID = r.Diagnosis_ID
    JOIN Test t ON r.Test_ID = t.Test_ID

select * from [AllTestResults]
```

	Patient_Name	Patient_ID	Purpose	Results	Test_Name
1	Rick Johnson	1	Diabetes	Negative	lipid panel (cholesterol test)
2	Rick Johnson	1	Diabetes	Positive	lipid panel (cholesterol test)
3	Rick Johnson	1	Fever	Positive	Covid-19
4	Julie Geller	2	Back Pain	Negative	Bone membrane
5	Julie Geller	2	Cough	Positive	Chest Xray
6	Julie Geller	2	Fever	Positive	Covid-19
7	John Smith	3	Cough	Positive	Chest Xray
8	John Smith	3	Fever	Positive	Covid-19
9	John Smith	3	Pneumonia	Positive	Chest Xray
10	Justin Timberlake	4	Back Pain	Negative	Bone membrane
11	Justin Timberlake	4	Cough	Positive	Chest Xray
12	Peter Mcdonald	5	Back Pain	Negative	Bone membrane
13	Peter Mcdonald	5	Back Pain	Positive	Bone membrane
14	Peter Mcdonald	5	Pneumonia	Positive	Chest Xray
15	Rishi Kumar	6	Diabetes	Negative	lipid panel (cholesterol test)
16	Rishi Kumar	6	Headache	Negative	CT-Scan
17	Rishi Kumar	6	Hyperten...	Positive	EEG
18	Rishi Kumar	6	Leg Sym...	Negative	Bone membrane
19	Mark Kelter	7	Diabetes	Negative	lipid panel (cholesterol test)
20	Mark Kelter	7	Pneumonia	Positive	Chest Xray
21	Roy Bing	8	Fever	Negative	Bone membrane
22	Roy Bing	8	Leg Sym...	Negative	Bone membrane
23	Jhanvi Shetty	9	Fever	Positive	Covid-19
24	Jhanvi Shetty	9	Headache	Negative	CT-Scan
25	Jhanvi Shetty	9	Hyperten...	Negative	EEG
26	Jhanvi Shetty	9	Leg Sym	Positive	Bone membrane



### 3. View for Doctor, Doctor Name, Facility and Category

```
CREATE VIEW [AllDoctorList]
AS
select d.Doctor_ID, d.Doctor_Name, f.Facility_Name, f.Facility_Category
from Doctor d
    JOIN Employment e ON d.Doctor_ID = e.Doctor_ID
    JOIN Healthcare_Facility f ON e.Facility_ID = f.Facility_ID

select * from [AllDoctorList]
```

	Doctor_ID	Doctor_Name	Facility_Name	Facility_Category
1	1	John Marshall	Brigham and Womens Hospital	Hospital
2	2	Maria Dmello	Nanavati Hospital	Hospital
3	3	Quincy Joseph	Childcare	Clinic
4	4	Chin Yen	Wondercare	Hospital
5	5	Mike Pearl	Mayo Clinic	Clinic
6	6	Green Field	Toronto General Hospital	Hospital
7	7	Paul Dewane	UMC Utrecht	Hospital
8	8	Plank Oto	Royal Melbourne Hospital	Hospital
9	9	Parthiv Patel	National University Hospital	Hospital
10	10	Manuel Ani	Grande Ospedale Metropolit...	Clinic

### Function

```
--- Functions

Create function dbo.AGE Cal (@Date_Of_Birth Date)
returns int
as
begin
    return datediff(year,@Date_Of_Birth,getDate())
end
```

## Procedures

### 1. Procedure 'GetAllPatient\_Insurance'

```
--- Procedures
CREATE PROCEDURE GetAllPatient_Insurance @PatientName varchar(30)
AS
BEGIN
SELECT p.Patient_Name, i.Provider_Name, i.Insurance_Type, p.Insurance_Exp_Date
FROM Insurance i
JOIN Patient p
ON i.Insurance_ID = p.Insurance_ID
WHERE p.Patient_Name = @PatientName
END

EXEC GetAllPatient_Insurance 'John Smith'
```

	Patient_Name	Provider_Name	Insurance_Type	Insurance_Exp_Date
1	John Smith	United Healthcare	HMO	2025-03-22

### 2. Procedure 'GetAllPatient\_Symptoms'

```
CREATE PROCEDURE GetAllPatient_Symptoms @PatientName nvarchar(30)
AS
BEGIN
SELECT p.Patient_Name, d.Symptom, d.Treatment, d.Severity
FROM Visit v
JOIN Patient p
ON v.Patient_ID = p.Patient_ID
JOIN Diagnosis d
ON v.Diagnosis_ID = d.Diagnosis_ID
WHERE p.Patient_Name = @PatientName
END

EXEC GetAllPatient_Symptoms 'John Smith'
```

	Patient_Name	Symptom	Treatment	Severity
1	John Smith	Chest Pain	Rest at home with antibiotics	High
2	John Smith	Fever	Rest and drink plenty of fluids	Low
3	John Smith	Chest Pain	Rest at home with antibiotics	Low

### 3. Procedure 'GetAllPatient\_Facility'

```
CREATE PROCEDURE GetAllPatient_Facility @PatientName nvarchar(30)
AS
BEGIN
SELECT p.Patient_Name, doc.Doctor_Name, h.Facility_Name, h.Facility_Category
FROM Visit v
JOIN Patient p
ON v.Patient_ID = p.Patient_ID
JOIN Diagnosis d
ON v.Diagnosis_ID = d.Diagnosis_ID
JOIN Healthcare_Facility h
ON v.Facility_ID = h.Facility_ID
JOIN DOCTOR doc
ON v.Doctor_ID = doc.Doctor_ID
WHERE p.Patient_Name = @PatientName
END

EXEC GetAllPatient_Facility 'John Smith'
```

	Patient_Name	Doctor_Name	Facility_Name	Facility_Category
1	John Smith	Mike Pearl	Royal Melbourne Hospital	Hospital
2	John Smith	John Marshall	Mayo Clinic	Clinic
3	John Smith	Green Field	Nanavati Hospital	Hospital

### Non-Clustered Indexes

```
--- Non Clustered Indexes

--Index on Report Table on Diagnosis ID
CREATE NONCLUSTERED INDEX index_report
ON [dbo].Report (Diagnosis_ID ASC);

--Index on Doctor Table on License Number
CREATE NONCLUSTERED INDEX index_doctor
ON [dbo].Doctor (License_Number ASC);

--Index on Prescription Table on Drug ID
CREATE NONCLUSTERED INDEX index_drugID
ON [dbo].Prescription (Drug_ID ASC);
```

# Healthcare Facilities Analysis Report

Country, State, City

▼

All

▼

Facilities

▼

All

▼

Patients

▼

All

▼

Doctors

▼

All

▼

Symptoms

▼

All

▼

Treatments

▼

All

▼

Visit\_Date

▼

1/7/2022

📅

12/28/2022

📅

Drug\_Name

▼

All

▼

Tests

▼

All

▼

10

#Healthcare Facilities

10

#Doctors

10

#Patients

7

#Symptoms

13

#Tests

10

#Drugs

10

#Insurance Providers

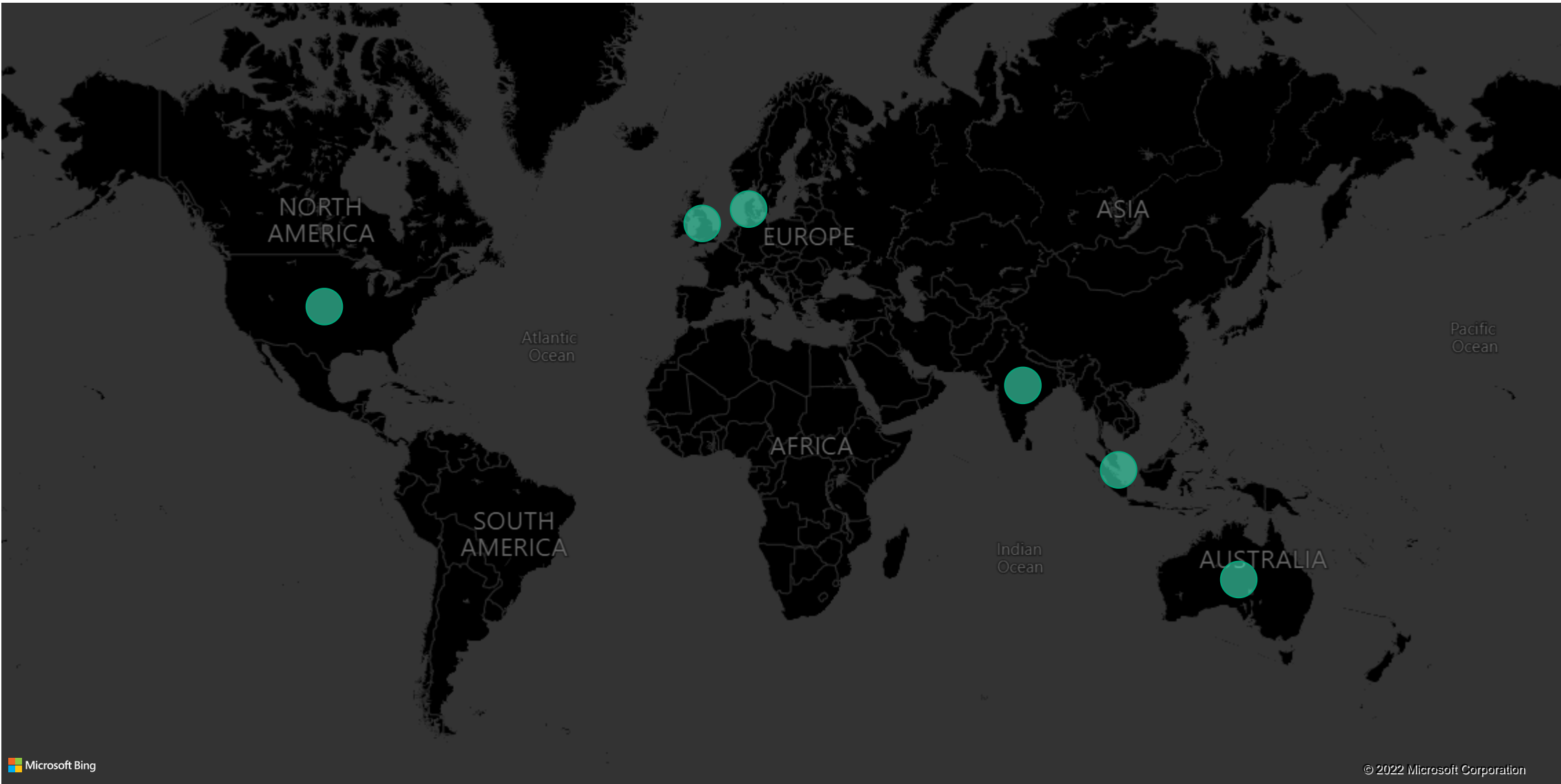
10

#Insurance Types

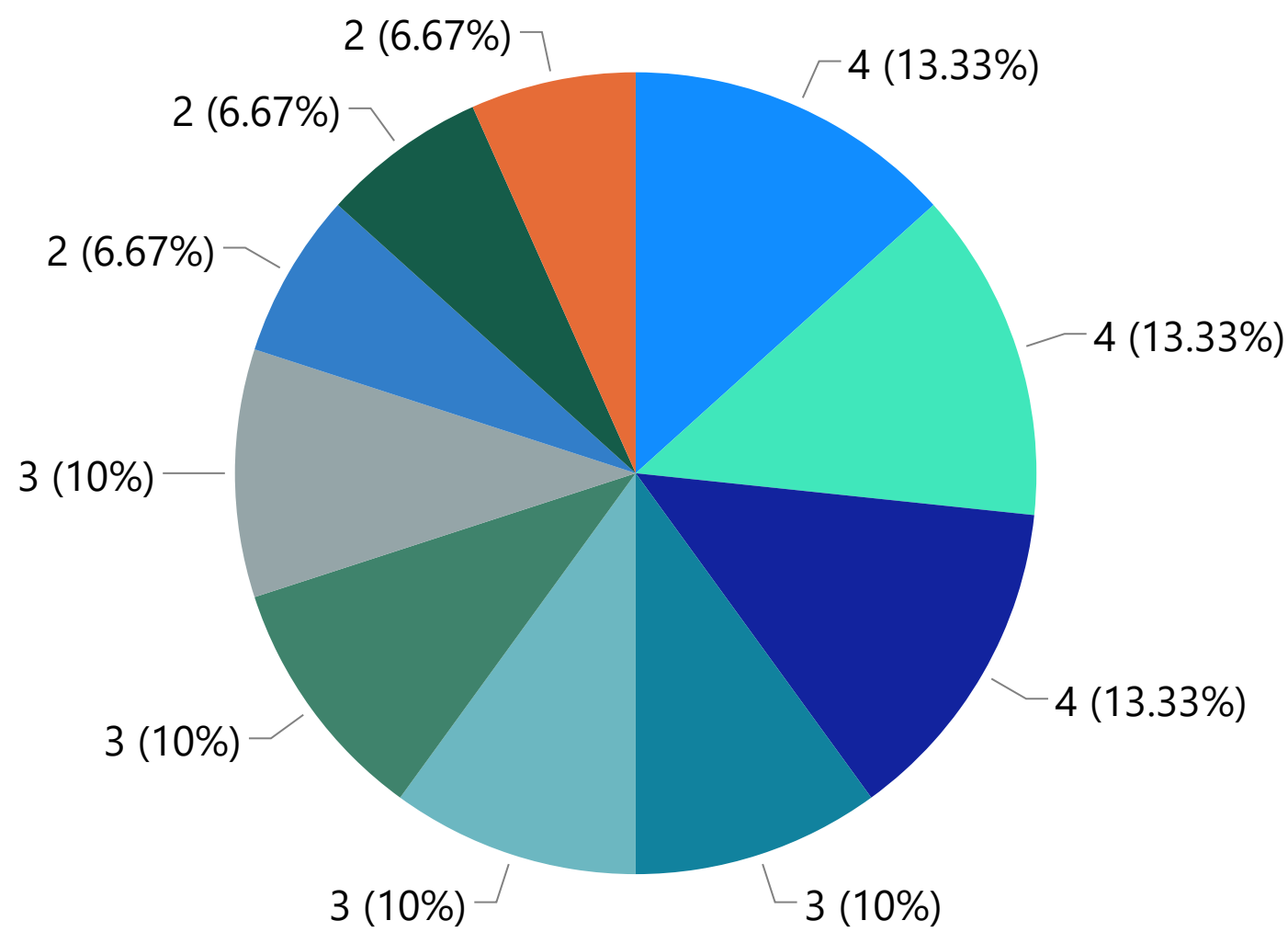
10

#Drug Manufacturers

Distribution of Healthcare Facilities Worldwide



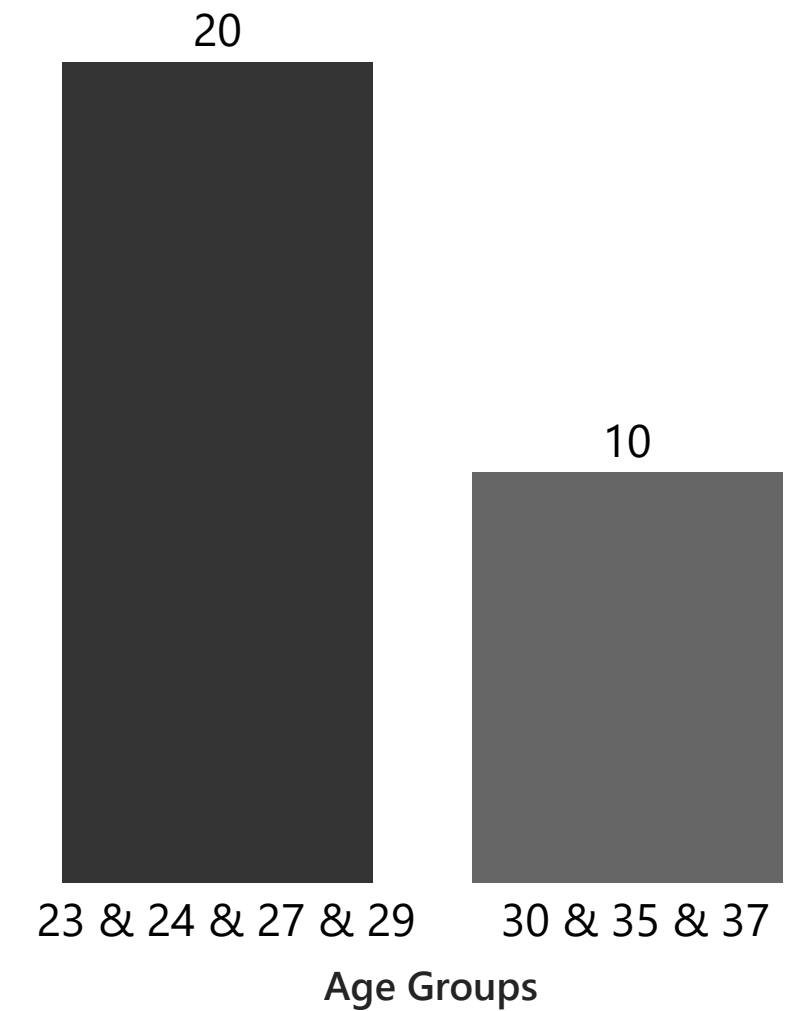
Distribution of Patients in Healthcare Facilities



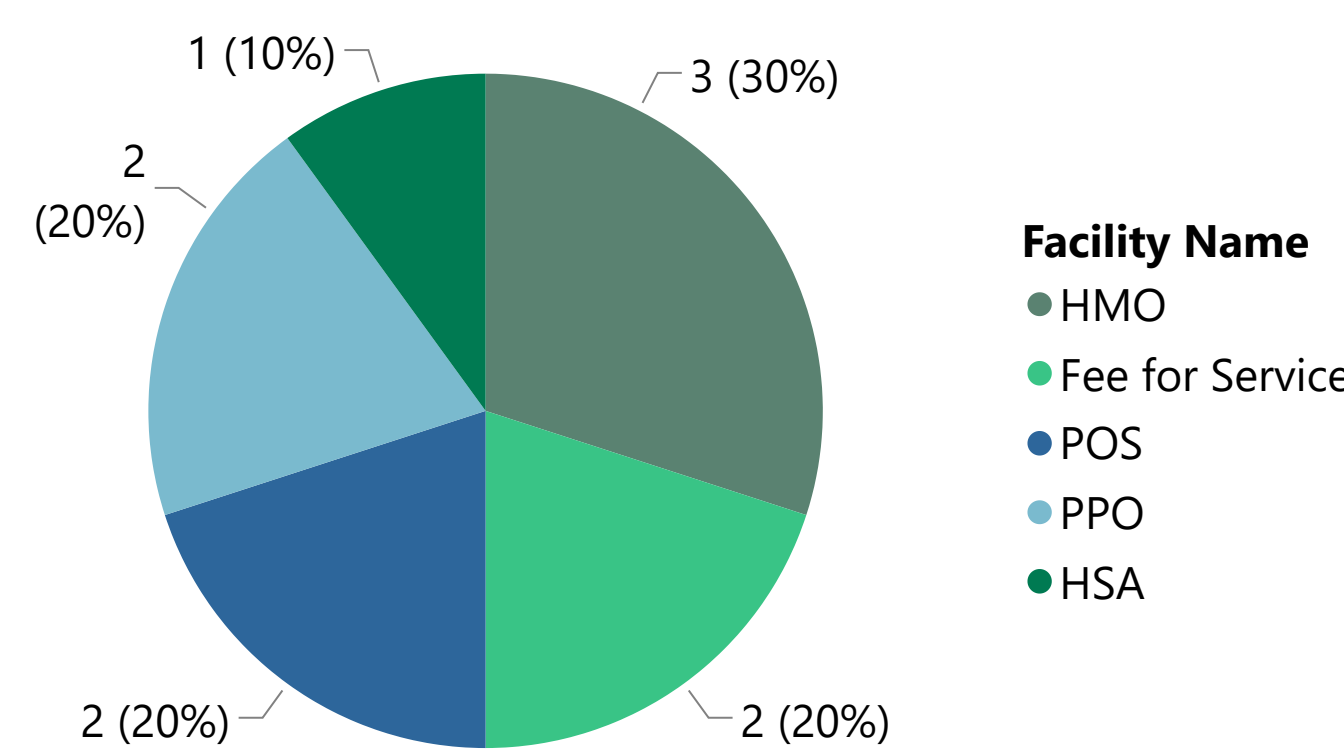
Facility Name

- Brigham and Womens Hospital
- Royal Melbourne Hospital
- UMC Utrecht
- Childcare
- Grande Ospedale Metropolitano Niguarda
- National University Hospital
- Toronto General Hospital
- Mayo Clinic
- Nanavati Hospital
- Wondercare

#No of Symptoms by Age Groups



Distribution of Patients in Healthcare Facilities



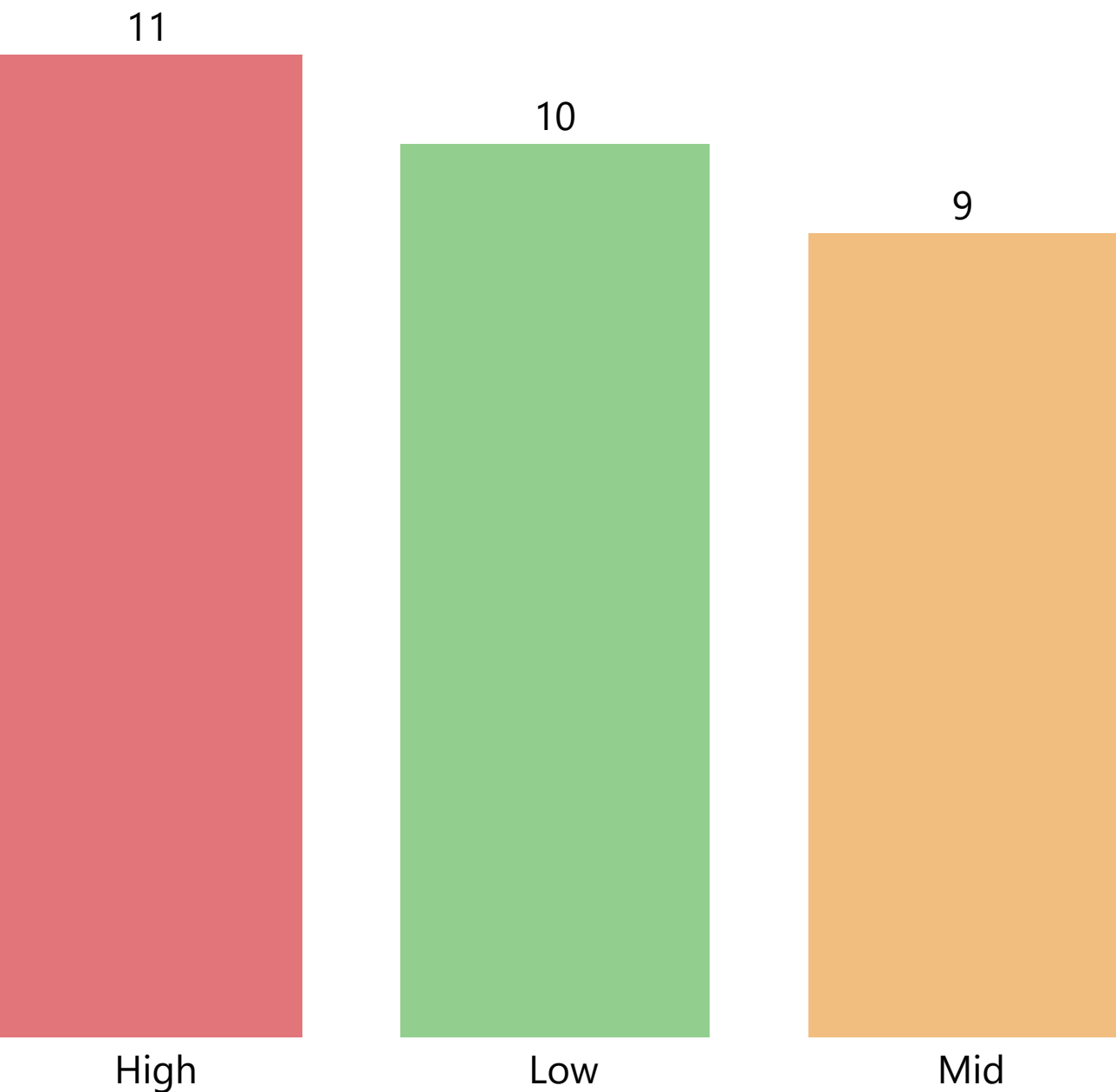
Facility Name

- HMO
- Fee for Service
- POS
- PPO
- HSA

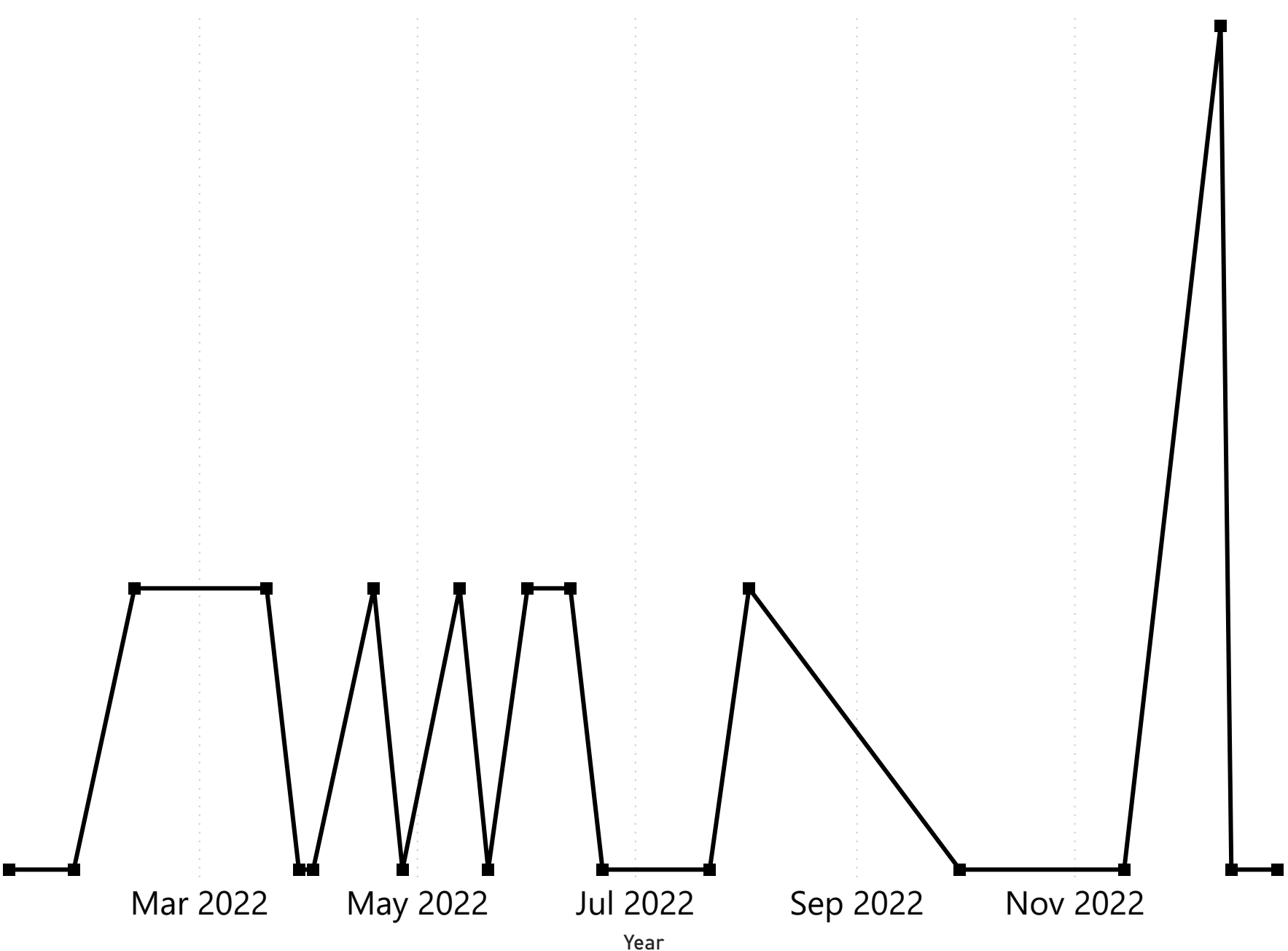
Distribution of Patients per Insurance Type



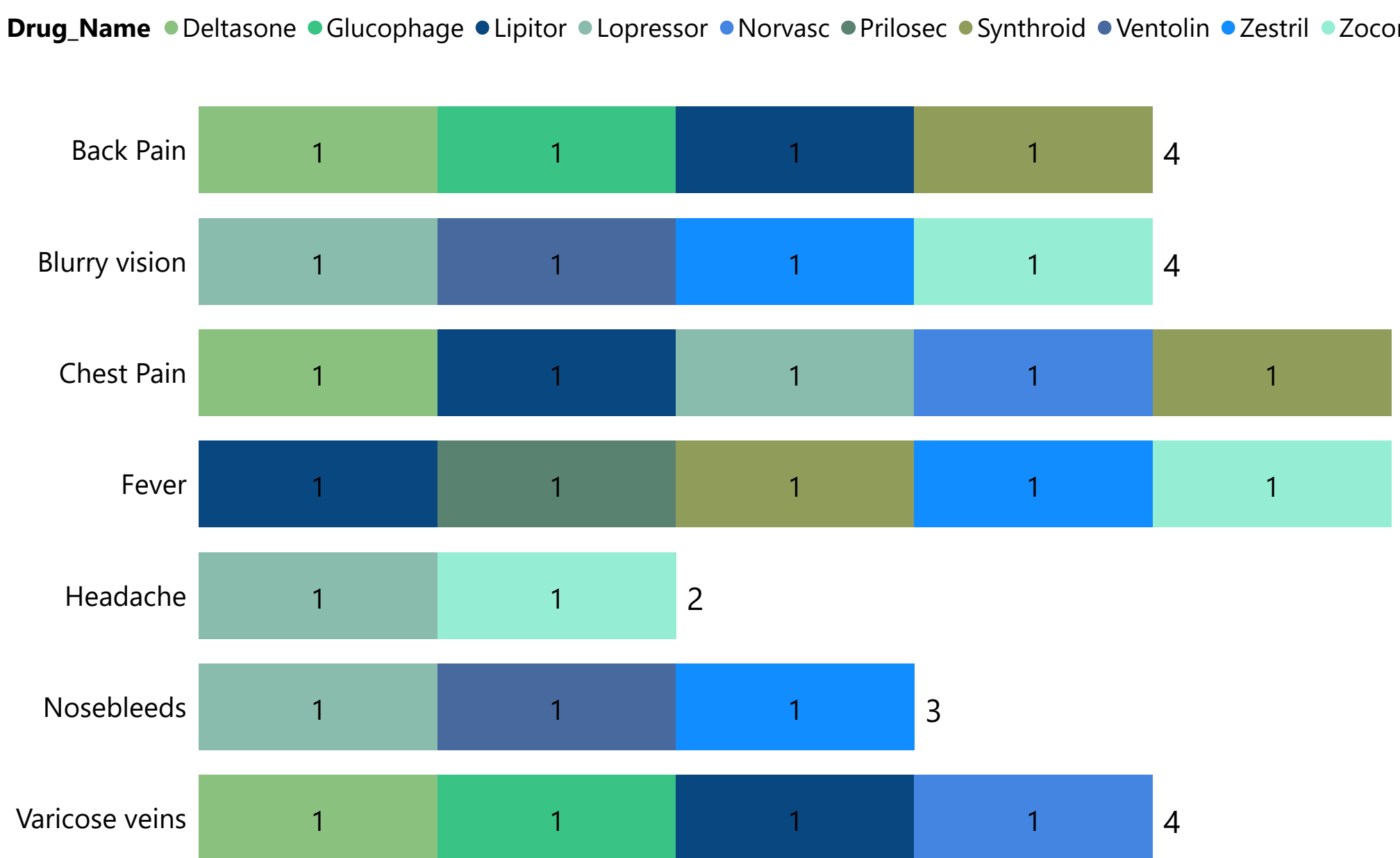
Comparison of Number of Patients by Severity



Trend of Patient Visits over Years



Comparison of Drugs across Symptoms







# Healthcare Facilities Detailed Report

Country, State, City

Facilities

Patients

Doctors

Symptoms

Treatments

Visit\_Date

Drug\_Name

Tests

All

All

All

All

All

All

1/7/2022

12/28/2022

All

All

Patient Name	Age	Symptom	Country	Gender	Facility_Name	Doctor_Name	Drug Name	Test Name	Test Category	Results	Report_Date
Roy Bing	30	Fever	UK	Male	Wondercare	Chin Yen	Zestril	Bone membrane	X-Ray	Negative	12/17/2022
Roy Bing	30	Varicose veins	UK	Male	UMC Utrecht	Paul Dewane	Deltasone	Bone membrane	X-Ray	Negative	01/27/2022
Ronie Jones	23	Headache	USA	Male	Brigham and Womens Hospital	John Marshall	Lopressor	CT-Scan	Sonography	Positive	06/02/2022
Ronie Jones	23	Nosebleeds	USA	Male	Royal Melbourne Hospital	Plank Oto	Lopressor	EEG	Sonography	Negative	08/05/2022
Ronie Jones	23	Varicose veins	USA	Male	Grande Ospedale Metropolitano Niguarda	Manuel Ani	Glucophage	Bone membrane	X-Ray	Positive	12/17/2022
Rishi Kumar	24	Blurry vision	India	Male	Royal Melbourne Hospital	Plank Oto	Lopressor	lipid panel (cholesterol test)	Blood Test	Negative	06/15/2022
Rishi Kumar	24	Headache	India	Male	UMC Utrecht	Paul Dewane	Zocor	CT-Scan	Sonography	Negative	04/21/2022
Rishi Kumar	24	Nosebleeds	India	Male	Nanavati Hospital	Maria Dmello	Zestril	EEG	Sonography	Positive	03/30/2022
Rishi Kumar	24	Varicose veins	India	Male	UMC Utrecht	Paul Dewane	Norvasc	Bone membrane	X-Ray	Negative	01/09/2022
Rick Johnson	35	Blurry vision	USA	Non-Binary	National University Hospital	Parthiv Patel	Ventolin	lipid panel (cholesterol test)	Blood Test	Negative	10/01/2022
Rick Johnson	35	Blurry vision	USA	Non-Binary	Brigham and Womens Hospital	John Marshall	Zestril	lipid panel (cholesterol test)	Blood Test	Positive	11/17/2022
Rick Johnson	35	Fever	USA	Non-Binary	Royal Melbourne Hospital	Plank Oto	Prilosec	Covid-19	Covid Test	Positive	03/22/2022
Peter Mcdonald	37	Back Pain	Italy	Male	Toronto General Hospital	Green Field	Deltasone	Bone membrane	X-Ray	Positive	05/15/2022
Peter Mcdonald	37	Back Pain	Italy	Male	Childcare	Quincy Joseph	Synthroid	Bone membrane	X-Ray	Negative	12/15/2022
Peter Mcdonald	37	Fever	Italy	Male	Brigham and Womens Hospital	John Marshall	Zocor	Chest Xray	X-Ray	Positive	04/22/2022
Mark Kelter	30	Blurry vision	France	Male	Nanavati Hospital	Maria Dmello	Zocor	lipid panel (cholesterol test)	Blood Test	Negative	03/22/2022
Mark Kelter	30	Chest Pain	France	Male	Wondercare	Chin Yen	Norvasc	Chest Xray	X-Ray	Positive	12/16/2022
Justin Timberlake	24	Back Pain	USA	Male	Grande Ospedale Metropolitano Niguarda	Manuel Ani	Glucophage	Bone membrane	X-Ray	Negative	02/15/2022
Justin Timberlake	24	Chest Pain	USA	Male	Royal Melbourne Hospital	Plank Oto	Lopressor	Chest Xray	X-Ray	Positive	04/04/2022
Julie Geller	29	Back Pain	Ireland	Female	National University Hospital	Parthiv Patel	Deltasone	Bone membrane	X-Ray	Negative	06/24/2022
Julie Geller	29	Back Pain	Ireland	Female	Mayo Clinic	Mike Pearl	Lipitor	Bone membrane	X-Ray	Negative	12/30/2022
Julie Geller	29	Chest Pain	Ireland	Female	National University Hospital	Parthiv Patel	Synthroid	Chest Xray	X-Ray	Positive	02/14/2022
Julie Geller	29	Fever	Ireland	Female	Toronto General Hospital	Green Field	Prilosec	Covid-19	Covid Test	Positive	05/23/2022
John Smith	27	Chest Pain	Germany	Male	Toronto General Hospital	Green Field	Deltasone	Chest Xray	X-Ray	Positive	07/24/2022
John Smith	27	Chest Pain	Germany	Male	Mayo Clinic	Mike Pearl	Lipitor	Chest Xray	X-Ray	Positive	04/29/2022
John Smith	27	Fever	Germany	Male	Brigham and Womens Hospital	John Marshall	Lipitor	Covid-19	Covid Test	Positive	12/15/2022
Jhanvi Shetty	23	Fever	India	Female	Childcare	Quincy Joseph	Synthroid	Covid-19	Covid Test	Positive	08/04/2022
Jhanvi Shetty	23	Headache	India	Female	UMC Utrecht	Paul Dewane	Zocor	CT-Scan	Sonography	Negative	05/15/2022
Jhanvi Shetty	23	Nosebleeds	India	Female	Childcare	Quincy Joseph	Ventolin	EEG	Sonography	Negative	06/03/2022
Jhanvi Shetty	23	Varicose veins	India	Female	Grande Ospedale Metropolitano Niguarda	Manuel Ani	Lipitor	Bone membrane	X-Ray	Positive	06/16/2022

Year	Back Pain	Cough	Diabetes	Fever	Headache	Hypertension	Leg Symptoms	Pneumonia	Total
2022	5	3	4	5	3	3	4	3	30
January							2		2
7							1		1
25							1		1
February	1	1							2
11	1	1							2
March			1	1		1			3
20			1	1					2
29						1			1
April		1			1			2	4
2		1							1
19					1			1	2
27								1	1
May	1			1	1				3
June	1		1		1	1	1		5
July		1							1
August				1		1			2
2				1		1			2
September			1						1
November			1						1
December	2			2			1	1	6
Total	5	3	4	5	3	3	4	3	30

Doctor_Name	Gender	Degree	License_Number	License_Expiration_Date	Status	Emp_End_Date	Emp_Start_Date	Phone_Number
Chin Yen	Male	MD	MD2301	11/02/2013	License Expired		07/09/2001	7672321123
Green Field	Female	DCM	DCD9051	10/02/2026	License Active	09/12/2024	09/12/2012	6521234212
John Marshall	Male	MBBS	CAR1232	02/01/2020	License Expired		02/12/2012	9872123421
Manuel Ani	Male	DMD	DMD0321	10/02/2023	License Active	11/28/2027	11/24/2000	9821233212
Maria Dmello	Female	DMD	DMD2351	10/02/2023	License Active		03/24/2021	8572212123
Mike Pearl	Male	DMD	DMD2211	10/15/2025	License Active		10/30/2018	8098213412
Parthiv Patel	Male	MD	MD5063	11/02/2026	License Active	01/12/2026	01/15/2006	8542134651
Paul Dewane	Male	MBBS	CAR2351	11/02/2020	License Expired	12/01/2028	11/12/2012	3399997791
Plank Oto	Non-Binary	DMD	DMD1022	04/02/2024	License Active	05/06/2023	12/12/2012	3682135276
Quincy Joseph	Female	DCM	DCM2021	12/02/2022	License Active		06/10/2022	8892342143