**Info & Knowledge Management**

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**Scenario**

You are working in risk management and need to track medication administration errors and adverse events for patients over 6 months. You are receiving information from the inpatient areas, outpatient clinics, and home health.

PICOT question:

(P): Patients in inpatient areas, outpatient clinics, and home health

(I): Track medication administration errors and adverse events

(C): compared to not tracking medication errors and adverse events

(O): result in finding the root cause of the problem

(T): over six months.

Following are the SQL queries to create SCHEMAS and TABLES I mentioned in the Module 2 Assignment in Week 5.

CREATE SCHEMA Risk\_Management;

SET SCHEMA Risk\_Management;

CREATE TABLE Medication( Medication\_id int PRIMARY KEY,

Medication name varchar(20),

Medication dose varchar (15),

Medication route varchar (10),

Medication\_frequency varchar (15),

Start\_date date,

Stop\_date date,

Patient\_id int);

CREATE TABLE Patient (Patient\_id Number PRIMARY KEY,

First\_name varchar (20),

Last\_name varchar (20),

Gender varchar (10),

Date\_of\_Birth date,

Address varchar (50),

Phone char (12),

Social\_Security\_Number char (11) UNIQUE,

Email varchar (30),

Insurance varchar(50),

Patient\_type varchar (20));

CREATE TABLE Home\_Health (Patient\_id int PRIMARY KEY,

visit\_id int,

visit\_date date,

Nurse\_name varchar (20),

Visit\_type varchar (20)

Facility\_name varchar (20),

Facility\_address varchar (100));

CREATE TABLE Outpatient\_Clinic (Appointment\_id int PRIMARY KEY,

Patient\_id int,

Appointment\_date date,

Clinic\_name varchar (50),

Provider\_name varchar (30));

CREATE TABLE Inpatient\_Areas (Admission\_id int PRIMARY KEY,

Patient\_id int,

Department\_id int,

Department\_name varchar (20),

Admission\_date date,

Discharge\_date date,

Ward varchar (10)

Bed number int,

Facility\_name varchar (50),

Facility\_address varchar (50));

CREATE TABLE Medication\_Administration\_Error(Error\_id int PRIMARY KEY,

Patient\_id int,

Medication\_id int,

Error\_date date,

Error\_type varchar (20) NOT NULL,

Event\_type varchar (20),

Patient\_type varchar (20));

CREATE TABLE Adverse\_Event (Event\_id int PRIMARY KEY,

Patient\_id int,

Event\_date date,

Event\_type varchar (20) NOT NULL);

The Following SQL query will be used to address my PICOT question.

SELECT patient\_type, COUNT (\*) AS num\_patients

FROM (

    SELECT patient\_type, error\_type, event\_type

    FROM Medication\_Administration\_Error

JOIN Inpatient\_Areas ON Medication\_Administration\_Error.patient\_id= Inpatient\_Areas.patient\_id

    UNION

    SELECT patient\_type, Error\_type, Event\_type

    FROM Medication\_Administration\_Error

    JOIN Outpatient\_Clinic ON Medication\_Administration\_Error.patient\_id= Outpatient\_Clinic.patient\_id

    UNION

    SELECT patient\_type, Error\_type, Event\_type

    FROM Medication\_Administration\_Error

    JOIN Home\_Health ON Medication\_Administration\_Error.patient\_id= Home\_Health.patient\_id

) AS type

GROUP BY patient\_type

HAVING COUNT (\*) > 5

**Summary**

This query returns the number of patients in each patient type (Inpatient\_Areas, Outpatient\_Clinic, and Home\_Health) who experienced a medication error and adverse event. This information can be used to compare the number of patients in each group within six months.

**References:**

Harrington, J. L. (2016). Using SQL to implement a relational design. In Relational Database Design and Implementation (4th ed ) essay, Morgan Kaufmann.