

All queries are read-only templates. Always add your date filter. Always start with TOP 100 during development. Validate results against a known source before delivering to stakeholders.

QUERY 1: PATIENT VOLUME BY DEPARTMENT AND ENCOUNTER TYPE

Counts encounters and unique patients by department for a defined period. Confirm with stakeholder whether they need encounter count or unique patient count - these are different numbers.

```
SELECT
  d.DEPARTMENT_NAME,
  zc.NAME AS ENC_TYPE,
  COUNT(pe.PAT_ENC_CSN_ID) AS ENCOUNTER_COUNT,
  COUNT(DISTINCT pe.PAT_ID) AS UNIQUE_PATIENTS
FROM PAT_ENC pe
INNER JOIN CLARITY_DEP d ON pe.DEPARTMENT_ID = d.DEPARTMENT_ID
LEFT JOIN ZC_ENC_TYPE zc ON pe.ENC_TYPE_C = zc.ENC_TYPE_C
WHERE pe.HOSP_ADMSN_TIME >= '2026-01-01'
AND pe.HOSP_ADMSN_TIME < '2026-02-01'
AND pe.ENC_TYPE_C IN (3, 101, 50) -- 3=Hospital, 101=Office, 50=ED
GROUP BY d.DEPARTMENT_NAME, zc.NAME
ORDER BY ENCOUNTER_COUNT DESC;
```

- COUNT(CSN) = encounter count. COUNT(DISTINCT PAT_ID) = unique patient count.
- ZC_ENC_TYPE join makes the ENC_TYPE_C code human-readable. Never skip ZC_ joins.
- ENC_TYPE_C values vary by Epic version - confirm codes with your Epic team.

QUERY 2: INPATIENT LENGTH OF STAY (DECIMAL DAYS)

Calculates LOS as decimal days using minute-level precision. Use DATEDIFF(MINUTE)/1440 not DATEDIFF(DAY) to avoid counting midnight crossings instead of actual elapsed time.

```
SELECT TOP 1000
  pe.PAT_ENC_CSN_ID,
  p.PAT_MRN_ID,
  pe.HOSP_ADMSN_TIME,
  pe.HOSP_DISCHRG_TIME,
  CAST(DATEDIFF(MINUTE,
  pe.HOSP_ADMSN_TIME,
  pe.HOSP_DISCHRG_TIME) AS DECIMAL(10,2)) / 1440.0 AS LOS_DAYS,
  d.DEPARTMENT_NAME AS ADMIT_DEPT
FROM PAT_ENC pe
INNER JOIN PATIENT p ON pe.PAT_ID = p.PAT_ID
INNER JOIN CLARITY_DEP d ON pe.DEPARTMENT_ID = d.DEPARTMENT_ID
```

```

WHERE pe.HOSP_ADMSN_TIME >= '2026-01-01'
AND pe.HOSP_ADMSN_TIME < '2026-02-01'
AND pe.ENC_TYPE_C = 3 -- Hospital Encounter (inpatient)
AND pe.HOSP_DISCHRG_TIME IS NOT NULL; -- Exclude still-admitted patients

```

- Remove TOP 1000 only after confirming query logic on sample data.
- HOSP_DISCHRG_TIME IS NOT NULL excludes currently admitted patients from LOS average.
- DATEDIFF(DAY) counts midnight crossings - a 2-hour stay crossing midnight = 1 day. Use MINUTE/1440.

QUERY 3: ICD-10 DIAGNOSIS ANALYSIS - PRIMARY DIAGNOSIS ONLY

Counts encounters by primary ICD-10 diagnosis. The PRIMARY_DX_YN filter is essential - without it, each encounter is counted once per diagnosis.

```

SELECT
edg.CODE AS ICD10_CODE,
edg.CODE_DESC AS DIAGNOSIS_NAME,
COUNT(pe.PAT_ENC_CSN_ID) AS ENCOUNTER_COUNT,
COUNT(DISTINCT pe.PAT_ID) AS UNIQUE_PATIENTS
FROM PAT_ENC pe
INNER JOIN PAT_ENC_DX dx ON pe.PAT_ENC_CSN_ID = dx.PAT_ENC_CSN_ID
INNER JOIN CLARITY_EDG edg ON dx.DX_ID = edg.DX_ID
WHERE pe.HOSP_ADMSN_TIME >= '2026-01-01'
AND pe.HOSP_ADMSN_TIME < '2026-04-01'
AND dx.PRIMARY_DX_YN = 'Y' -- Primary diagnosis only
AND edg.CODE LIKE 'A41%' -- Sepsis ICD-10 range
GROUP BY edg.CODE, edg.CODE_DESC
ORDER BY ENCOUNTER_COUNT DESC;

```

- PRIMARY_DX_YN = Y is the authoritative primary flag. Do not use LINE = 1 alone.
- Remove the LIKE filter to return all diagnoses. Add TOP 25 for a top-diagnosis report.
- CLARITY_EDG holds the ICD-10 code dictionary. edg.CODE is the string code (e.g., "A41.9").

QUERY 4: LAB ORDER TURNAROUND TIME (ORDER TO RESULT)

Measures time from lab order placement to result verification. Useful for sepsis bundle compliance (lactate TAT) and operational lab performance.

```

SELECT TOP 500
op.ORDER_PROC_ID,
pe.PAT_ENC_CSN_ID,
p.PAT_MRN_ID,
proc_name.NAME AS PROC_NAME,
op.ORDER_TIME,
orr.RESULT_TIME,
CAST(DATEDIFF(MINUTE,
op.ORDER_TIME,
orr.RESULT_TIME) AS DECIMAL(10,2)) / 60.0 AS TAT_HOURS

```

```

FROM ORDER_PROC op
INNER JOIN PAT_ENC pe ON op.PAT_ENC_CSN_ID = pe.PAT_ENC_CSN_ID
INNER JOIN PATIENT p ON pe.PAT_ID = p.PAT_ID
INNER JOIN ORDER_RESULTS orr ON op.ORDER_PROC_ID = orr.ORDER_PROC_ID
LEFT JOIN ZC_PROC_TYPE proc_name ON op.PROC_ID = proc_name.PROC_TYPE_C
WHERE op.ORDER_TIME >= '2026-01-01'
AND op.ORDER_TIME < '2026-02-01'
AND orr.RESULT_TIME IS NOT NULL
AND op.PROC_ID IN (1234, 5678) -- Replace with your PROC_IDs for CBC, BMP etc.
ORDER BY TAT_HOURS DESC;

```

- Replace PROC_ID values with your organization's IDs from the CLARITY_EAP (procedure) table.
- Joining ORDER_RESULTS returns one row per result component - add a DISTINCT or aggregate if needed.
- RESULT_TIME IS NOT NULL excludes pending orders from TAT calculation.

QUERY 5: MEDICATION ADMINISTRATION COMPLIANCE (EMAR)

Counts medication administrations vs scheduled doses to calculate administration compliance rate. Useful for medication bundle compliance (VTE prophylaxis, sepsis antibiotics).

```

SELECT
pe.PAT_ENC_CSN_ID,
d.DEPARTMENT_NAME,
om.MEDICATION_ID,
med.NAME AS MEDICATION_NAME,
COUNT(mai.ORDER_MED_ID) AS ADMIN_COUNT,
SUM(CASE WHEN mai.MAR_ACTION_C = 1 -- 1 = Given
THEN 1 ELSE 0 END) AS GIVEN_COUNT,
SUM(CASE WHEN mai.MAR_ACTION_C IN (2,3,4) -- 2=Not Given,3=Held,4=Patient Refused
THEN 1 ELSE 0 END) AS NOT_GIVEN_COUNT
FROM PAT_ENC pe
INNER JOIN CLARITY_DEP d ON pe.DEPARTMENT_ID = d.DEPARTMENT_ID
INNER JOIN ORDER_MED om ON pe.PAT_ENC_CSN_ID = om.PAT_ENC_CSN_ID
INNER JOIN MAR_ADMIN_INFO mai ON om.ORDER_MED_ID = mai.ORDER_MED_ID
INNER JOIN ZC_MEDICATION med ON om.MEDICATION_ID = med.MEDICATION_C
WHERE pe.HOSP_ADMSN_TIME >= '2026-01-01'
AND pe.HOSP_ADMSN_TIME < '2026-02-01'
AND om.MEDICATION_ID IN (111, 222) -- Replace with your medication IDs
GROUP BY pe.PAT_ENC_CSN_ID, d.DEPARTMENT_NAME,
om.MEDICATION_ID, med.NAME
ORDER BY pe.PAT_ENC_CSN_ID;

```

- MAR_ACTION_C values: 1=Given, 2=Not Given, 3=Held, 4=Patient Refused, 5=See Alternative.
- Replace MEDICATION_ID values with your formulary medication IDs from the CLARITY_MEDICATION table.
- This query counts eMAR documentation events - not actual clinical administration. Validate with nursing.

