

Clarity LOS Calculation Cheat Sheet

Epic Clarity | techfitflow.com | Confirm every column in your own Clarity Data Dictionary

1. Five LOS definitions

Definition	How it counts	Owner
Calendar days	DATEDIFF(day) on dates: midnights crossed	Operations, quality
Midnight census	Present at 00:00, discharge day excluded	Finance, CMS-style patient days
Elapsed hours	DATEDIFF(minute) / 60.0	Throughput, ED, staffing
Billing days	Payer rules on the claim	Revenue cycle
Same-day minimum 1	Same-day stay counts as 1	Some quality programs

2. DATEDIFF counts boundaries, not elapsed time

Admit	Discharge	DATEDIFF(day)	DATEDIFF(hour)	Elapsed
4/1 23:50	4/2 00:10	1	1	20 min
4/1 00:10	4/1 23:50	0	23	23 h 40 min
4/1 08:00	4/2 08:00	1	24	24 h
4/1 08:00	4/2 07:59	1	23	23 h 59 min

3. Syntax by engine

Engine	Calendar days	Elapsed hours
SQL Server	DATEDIFF(day, a, d)	DATEDIFF(minute, a, d) / 60.0
Oracle	TRUNC(d) - TRUNC(a)	(d - a) * 24
Snowflake	DATEDIFF(day, a, d)	DATEDIFF(minute, a, d) / 60.0
PostgreSQL	d::date - a::date	EXTRACT(EPOCH FROM d - a) / 3600

4. Source columns

Column	Note
PAT_ENC_HSP.HOSP_ADMSN_TIME	Null for outpatient; may equal ED arrival at some sites
PAT_ENC_HSP.HOSP_DISCH_TIME	Null while in house; DATEDIFF returns null
PAT_ENC_HSP.ADT_PAT_CLASS_C	Decode with ZC_PAT_CLASS; class can change mid-stay
CLARITY_ADT.EFFECTIVE_TIME	Exclude canceled events for unit LOS

5. Core query

```
SELECT AVG(CAST(DATEDIFF(day, CAST(h.HOSP_ADMSN_TIME AS date),
                        CAST(h.HOSP_DISCH_TIME AS date)) AS decimal(9,2))) AS avg_lo,
        COUNT(DISTINCT h.PAT_ENC_CSN_ID) AS encounters
FROM PAT_ENC_HSP h
JOIN ZC_PAT_CLASS pc ON pc.ADT_PAT_CLASS_C = h.ADT_PAT_CLASS_C
WHERE h.HOSP_DISCH_TIME >= @start AND h.HOSP_DISCH_TIME < @end
      AND h.HOSP_ADMSN_TIME IS NOT NULL
      AND pc.NAME = 'Inpatient';
```

Open stays (no discharge yet)

```
SELECT PAT_ENC_CSN_ID, DATEDIFF(day, HOSP_ADMSN_TIME, @extract_time) AS los_to_date
FROM PAT_ENC_HSP
WHERE HOSP_DISCH_TIME IS NULL AND HOSP_ADMSN_TIME IS NOT NULL;
```

Discharge-hour distribution check

```
SELECT DATEPART(hour, HOSP_DISCH_TIME) AS hr, COUNT(*) FROM PAT_ENC_HSP
WHERE HOSP_DISCH_TIME >= @start AND HOSP_DISCH_TIME < @end
GROUP BY DATEPART(hour, HOSP_DISCH_TIME) ORDER BY hr;
```

6. Metric definition sheet (fill before development)

Field	Your entry
Metric name	
Grain (CSN / HAR / unit)	
Start event	
End event	
Open stays	
Class filter	
Same-day rule	
Cohort date (admit / discharge)	
Exclusions	
Benchmark (e.g., CMS GMLOS year)	
Owner / freeze date	

7. Validation pack

- [] Run the four boundary rows through the query.
- [] Compare five encounters to Hyperspace to the minute.
- [] Count null discharge times; explain every one.
- [] Reconcile encounter count to the ADT discharge report.
- [] Check the discharge-hour distribution for spikes at hour 0 or 23.
- [] Record the Clarity extract time. Flag stays across daylight saving changes.

Sources: Microsoft Learn DATEDIFF (Transact-SQL); CMS MS-DRG classifications and software; Epic Clarity Data Dictionary (UserWeb). Aggregate in SQL and apply the HIPAA minimum necessary standard.