

Thank you for your inquiry specific to CMS871v3 Hospital Harm – Severe Hyperglycemia. Your calculations in the table are correct with one exception. DayNumb 9 is not a HypEvt, therefore the total number of hyperglycemic event days, which is Measure Observation 2 (associated with the numerator), is 3.

To clarify, a hyperglycemia event is defined as:

- 1) A day with at least one blood glucose value >300 mg/dL;
- OR
- 2) A day where a blood glucose test was not done, and it was preceded by two consecutive days where at least one glucose value during each of the two days was >=200 mg/dL

DayNumb 5 is a hyperglycemic event day because it is a day with a glucose value >300.

DayNumb 8 is a hyperglycemic event day because it is a day where a glucose was not measured, and it was immediately preceded by two consecutive days where at least one glucose value during each of the two days (i.e., DayNumb7 and DayNumb6) was >=200 mg/dL.

DayNumb 9 is not a hyperglycemic event day because it is not a day with a glucose value >300, and although it is a day where a glucose test was not done, it was NOT preceded by two consecutive days where at least one glucose value during each of the two days was >=200. The day preceding DayNumb 9 (which is DayNumb 8) has no glucose test so does not meet the criteria. Both of the two preceding days must have a glucose >=200mg.

DayNumb 10 is a hyperglycemic event day because it is a day with a glucose value >300.

Table with corrected 'Is_HypEvt' results:

DayNumb	BegDay Per	EndDay Per	Is_24hr Day	Is_Gluc Sev (>300)	Is_Gluc Elv (>=200)	Is_Gluc Any	Is_EligDay	Is_HypEvt
1	2023-08-26 08:00	2023-08-27 07:59	1	0	0	0	0	
2	2023-08-27 08:00	2023-08-28 07:59	1	0	0	0	1	
3	2023-08-28 08:00	2023-08-29 07:59	1	0	0	0	1	
4	2023-08-29 08:00	2023-08-30 07:59	1	0	0	0	1	
5	2023-08-30 08:00	2023-08-31 07:59	1	1	1	1	1	1
6	2023-08-31 08:00	2023-09-01 07:59	1	0	1	1	1	
7	2023-09-01 08:00	2023-09-02 07:59	1	0	1	1	1	
8	2023-09-02 08:00	2023-09-03 07:59	1	0	0	0	1	1
9	2023-09-03 08:00	2023-09-04 07:59	1	0	0	0	1	0

10	2023-09-04 08:00	2023-09-05 07:59	1	1	1	1	1	1
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We replicated your encounter (using an encounter end day of 9/10/23 to ensure it was >10 days) using CMS' Bonnie testing tool. The test results verified the number of hyperglycemic event days = 3. The Bonnie tool displays the days in the encounter that meets the hyperglycemic event day criteria by indicating 'true' as seen here for DayNumb 5:

```
{ dayIndex: 5,
  dayPeriod: INTERVAL: 08/30/2023 8:00 AM - 08/31/2023 8:00 AM,
  hasHyperglycemicEvent: true },
```

We have attached the Word document titled '3 HyperEventDays test display' where it indicates 'true' for days 5, 8, and 10.

Regarding your question why the specs use 'dayIndex - 2' and 'dayIndex - 3', this is looking at the DayIndex that has no result and subtracts 2 days and 3 days to calculate the preceding days. However, the day of 'no result' is included in the calculation as 1 day. See example attached.