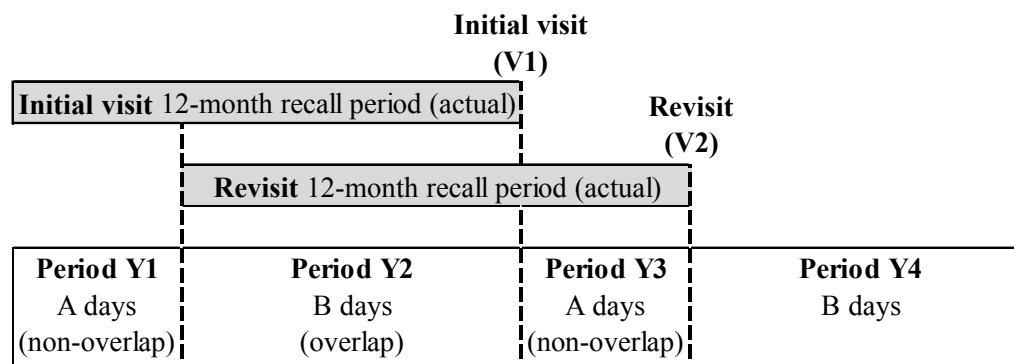


Method for correcting overlap in 12-month recall periods of medical encounters (doctor's visits, emergency department visits, hospital admissions)



For each person, let:

X1 = number of encounters reported at the initial visit

X2 = number of encounters reported at the revisit

D1 = Date of the initial visit

D2 = Date of the revisit

Define:

X1 = number of encounters during period Y1 + number of encounters during period Y2

X2 = number of encounters during period Y2 + number of encounters during period Y3

Assume:

- Encounters are uniformly distributed over the year before D1 (i.e., during periods Y1 and Y2).
- Encounters are uniformly distributed during period Y3, and encounters during Y4 have the same uniform distribution.

For each person, calculate:

1. $A = D2 - D1$, days in the overlap period
2. $M = A/30$, months in the overlap period
3. $Rate1 = X1/12$, the encounter rate per month during Y1 and Y2
4. $Rate2 = (X2 - \text{number of encounters in Y2})/M = X2 - (12-M)*RATE1]/M$, the encounter rate per month during Y3
5. $X1 - X2$ is the change between the initial visit and revisit.
6. $B = (Rate1 \times 12) - (Rate2 \times 12)$, is the benefit for the 12 months beginning at the initial visit.
7. BW = Winsorized benefit where values below the 1st percentile are replaced by the value of the 1st percentile, and values above the 99th percentile are replaced with the value of the 99th percentile.