**Decisions**

NA: the data is not available in the article, or the authors contacted but we couldn’t get response

Mean age: All included studies mean/median age 60 and above. When age reported in median/IQR (Q3&Q1), we converted into mean(sd) using the calculator[1]. When age reported separately for delirium and non-delirium group and no total study group age reported, if it was reported in median/IQR (Q3&Q1), first converted using the conversion calculator and then combined using two mean combining calculator[2]. If it was reported with only mean (sd) then we combined using the calculator (but doesn’t have sd)

One study the median age was 61 but when converted the mean age become 58.94 but still we keep the article considering the rule that we put mean/median age 60 and above and the potential of some error during conversion (conversion calculators are not perfect). We reason for conversion is to calculate the overall average age of the study participants.

When the study date wrong (CMA says the upper and lower interval not symmetric), as recommended from CMA developer first we removed the upper or lower confidence interval (which ever give the conservative estimate was taken, to at least minimize potential of giving more weight for incorrect data). In the data set we put hyphen (-) to indicate the data removed. If no option we raised error tolerance to 20% (default is 10%) to enter the data. If it was above that we excluded that data.

When OR alone provided I calculate log (OR) and SE(log) and entered the data into CMA (add how)

For some variable we inverted the given OR (e.g Hawley 2023 there is data for return to home, since we have studied institutionalization risk we inverted the provided OR (hence the result is for “not return to home” mostly to indicate institutionalization

When there is difference in population (we make sure that the only difference is delirium presence in one group and absent in the other)

loss to follow-up was high in some studies which can impair the generalizability of the findings

For the 2x2 data when the event was zero for both group or equal, since CMA doesn’t show the effect size we removed from CMA. (e.g Muzzana 2022, mortality)

We didn’t include composite variables (e.g., nursing home or death, functional impairment or death) due to we are looking the specific outcomes and deemed inappropriate to categorize into one of the outcome

For some studies only departure from emergency department found (there is no way to confirm whether they discharged to admission ward of home)

Standardized beta converted to Hedges’s g by Campbell collabortation calculator

If the study reported different sample size for the follow-up for different outcomes (e.g Bulic 2020). I took the higher one to calculate the follow-up sample size.

There may be difference in sample size and sex ratio because some study assessed the sex ratio from all included samples and delirium assessed different number samples size (e.g., Burrman 2011). Some have sample size for delirium and no-delirium but no sex ratio as well (e.g., Chan 2017). Sex ratio calculated from the baseline sample size whereas the delirium and no-delirium reported for complete cases (e.g, Diwell 2018, Katz 2001, Pasinika 2019)

Reference

1. University HKB. Estimating the sample mean and standard deviation (SD) from the five-number summary and its application in meta-analysis. Available from: <https://www.math.hkbu.edu.hk/~tongt/papers/median2mean.html>.

2. Poojary N. Combined Mean of Multiple Data Calculator. Available from: <https://www.calculatoratoz.com/en/combined-mean-of-multiple-data-calculator/Calc-6233>.