I deleted some columns “name”,” hispanic”,” ever\_tbi\_w\_loc”, ”race”, “dsm\_iv\_clinical\_diagnosis”, “nincds\_arda\_diagnosis”,” X10208.donor\_name

”, “X10208.structure\_id”

I replaced ages by mean.

act\_demented: No Dementia—0,Dementia--1

Sex: M—1 Female--0

**apo\_e4\_allele: Yes—1, No—0, NA-- -1**

longest\_loc\_duration: NA---1, No – 0, <10s—1, 10s-10min – 2, 10min-1h –3, 1h—4,

hot.deck to handle missing data

reoginized table

PCA Lasso

TBI, LOC, AGE, EDUCATION, SEX, PRESENCE OF ONE OR MORE COPIES OF THE APOE e4 allele.

Results There were 25 567 person-years of follow-up. History of TBI with LOC reported at study enrolment was associated with increased risk for TBI with LOC during follow-up, with adjusted HRs ranging from 2.54 (95% CI 1.42 to 4.52) for those reporting first injury before age 25 to 3.79 (95% CI 1.89 to 7.61) for those with first injury after age 55. History of TBI with LOC was not associated with elevated risk for developing dementia or AD. There was no association between baseline history of TBI with LOC and mortality, though TBI with LOC since the previous study visit (‘recent TBI’) was associated with increased mortality (HR 2.12, 95% CI 1.62 to 2.78).

Conclusions Individuals aged 65 or older who reported a history of TBI with LOC at any time in their lives were at elevated risk of subsequent re-injury. Recent TBI with LOC sustained in older adulthood was associated with increased risk for mortality. Findings support the need for close clinical monitoring of older adults who sustain a TBI with LOC.

Recent TBI did not influence AD risk, with an aTR of 0.95 (95% CI 0.65 to  1.38), and there was no indication of an interaction between recent TBI and APOE genotype for AD risk ([table 4](http://jnnp.bmj.com/content/84/2/177#T4)). There was a possible interaction between APOE genotype and recent TBI in increasing all-cause dementia risk (p=0.08) ([table 4](http://jnnp.bmj.com/content/84/2/177#T4)).

Risk for late-life re-injury, dementia and death among individuals with traumatic brain injury: a population-based study