

# Falls-Related Traumatic Brain Injury in Older People:

## Under-recognised, Under-diagnosed, Highly Fatal, Highly Preventable

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While it might be common knowledge that falls are the leading cause of injury hospitalisations, perhaps it's less well-known that falls are now also the leading cause of traumatic brain injury (TBI) – accounting for 2 in every 5 TBI admissions in Australia in 2004-2005.

This is not because more teenagers have decided to take drunken dives from balconies at 2 a.m. on a Saturday, but because of the ageing of the population. 3,300 older people were admitted for a falls-related TBI in the same year. Overall, TBI is 10 times as common as spinal injury and produces, on average, 3 times the level of disability - because it is the brain that is injured. And those who sustain a TBI can experience a range of disabilities that will affect them not only physically but also in the way they think, feel and behave.

Brain Injury Australia has recently completed a policy paper for the Australian Government on falls-related TBI, particularly in older people. Its findings came as a revelation. Firstly, while it was no surprise that those aged 85 years and over – the fastest growing segment of Australia's population – have the highest falls, falls injury, TBI and TBI death rates, it was shocking how high their death rates were.

Every local and international study of TBI outcomes in the “old old” demonstrates “100% mortality” – if you reach that age, fall over and land on your head, you die.

Secondly, even though fall-related injuries to the head are consistently the second most common after hip fracture, head trauma in older people is often overlooked and appropriate neurological assessment and monitoring forgotten. Such checking is vital since older people run a much greater risk of bleeding in the brain following head trauma. Add blood-thinning medications like warfarin to the mix and that risk increases dramatically.

Thirdly, Brain Injury Australia conducted a comprehensive scan of the nation's falls prevention programs and, though rates of falls-related injuries to the head are rising while those for hip fracture are falling, brain injury/ head injury simply fails to feature. Hip fracture appears regularly. Brain Injury Australia believes that it is the responsibility of public health initiatives in injury prevention to not only cater for the information needs of this generation of older people but also look over the horizon at those coming through. Insofar as current consumers of falls prevention programs are motivated by the threat to their physical independence from hip fracture, Australia's ageing “baby boomers” are just as likely to respond to the potential loss of mind, and changed behaviour, from a TBI. (Otherwise, why are they bothering with crosswords and sudoku?)

Lastly, and maybe I'm guilty of unfairly characterising the nation's geriatricians; their prevailing stereotype of a falls-related TBI is someone demented – or dementing – in residential aged care. And the prevailing attitude of some of them; what's a little TBI on top of their Alzheimer's? It's all just

age-related brain “failure”. In fact, while the rate of falls in residential aged care is much higher, the majority of them occur in the community, in the home. And what might be a “little” TBI for an 18 year-old will be much more than that for someone in their 80s. The research indicates that with every additional 10 years of age at injury, the odds on a poor outcome from TBI increase by 40% to 50%.

Brain Injury Australia's (initial) ambitions are always modest – the mere mention of TBI alongside other injuries as a falls risk. Australia, like the rest of the developed world, is facing a “perfect [demographic] storm” that will likely result in increasing rates of falls-related TBI – the combined effect of policies around “active ageing” and “ageing in place” with increased life expectancy and enhanced survivability from injury (due to improvements in acute care). The United States' Centers for Disease Control has read the writing on the wall and is currently engaged in an awareness campaign targeting TBI in “seniors”. And most falls, and falls-related TBI, are highly preventable as is “secondary” TBI from bleeding on the brain. For instance, men and women can be convinced that, at age 75 or 85, climbing a ladder to clear gutters may not be as smart as when they were 45 or 55. Residential aged care facilities and hospitals can be convinced to make “did you hit your head?” the first question asked of the fallen, from which all other assessment and management proceeds. ■