

The provision of walking aids to the overtly aggressive older adult who is a high risk of falls: a careful balancing act

Older adult psychiatric inpatients may have impaired balance and have an increased risk of falling for many reasons (Pellfolk *et al.*, 2009; Ko *et al.*, 2009). This population may be on psychotropic medication, which is in itself an independent risk factor for falls (Stubbs *et al.*, 2009). This is a group that may also be at elevated risk of osteoporosis and osteopenia; should they fall, they are more susceptible to osteoporotic fractures which are associated with high morbidity and mortality (Stubbs *et al.*, 2009). To counteract this risk, older adult psychiatric services should seek to adopt the strategies identified as being “gold standard” in general older adult rehabilitation settings, such as a multifactorial falls intervention program (Gillespie *et al.*, 2009). This would typically include a review of medication; environmental falls risk assessments, the provision of walking aids and strength and balance training (Gillespie *et al.*, 2009).

Physiotherapists have a central role in preventing falls in this population. Individually tailored strength and balance exercises are beneficial and may be directed under the provision of a chartered physiotherapist (Gillespie *et al.*, 2009). As part of their treatment approach, physiotherapists may provide the patient at risk of falls with a walking aid such as a zimmer frame or walking sticks. Within the general older adult population, the physiotherapist has little cause for concern when issuing such walking aids. However, among certain older adult psychiatric inpatients, such as those presenting with challenging and aggressive behavior, much greater care and consideration must be taken before doing so. This is because aggressive older adult psychiatric patients may use such a walking aid as a weapon to attack other staff and patients, with the potential to cause serious injury. This is a population that may express high and severe levels of aggressive and challenging behaviors (Stewart *et al.*, 2008), yet the consequences of falls in this group of people who are at elevated risk of osteoporosis may be serious and long lasting.

So what is the clinical team to do when working with the aggressive older adult who may well be osteoporotic and who has been identified as a high falls risk? Should one issue the walking aid and leave the patient with a potentially serious weapon? This would put others at considerable risk. Alternatively, the physiotherapist under the

direction of the wider clinical team could withhold the use of such a walking aid. The Townsend Division of St Andrews Healthcare deals with this scenario on a reasonably frequent basis. Our experience is that there is no general “rule of thumb”. The model we have developed involves the physiotherapist working with the aggressive older adult to quantify their balance impairment through standardized outcome measures. If this confirms that the patient is a high falls risk; the physiotherapist reports back to the clinical team at a meeting to discuss the pros and cons of issuing such a walking aid. This is a process that cannot be rushed, since the consequences of the patient falling or using the walking aid as a weapon may be equally serious. In most cases, the clinical team has tended to favor not issuing the aggressive older adult with a walking aid. This leaves the aggressive older adult at an increased risk of falling. To make provision for this the team seeks to increase observations on such patients to minimize the risk of falls. Clearly this still leaves the patient at risk of falls, but we have found that quick intervention by the observing staff helps to reduce the risk of falls. This has initial cost implications, but should such an aggressive patient be admitted to a local general hospital with a fractured femur, for example, staff will have to be deployed whilst this patient undergoes rehabilitation. This is in addition to the costs of the hospital admission to treat the patient. Should such situations arise, clear documentation of the clinical reasoning processes behind the team’s decision is essential.

In summary, aggressive older adults may have impaired balance, be at elevated risk of falls and of osteoporosis (Stubbs *et al.*, 2009). The consequences of this can be life threatening and may leave the patient with permanent disability. Physiotherapists routinely issue walking aids to reduce the risk of falls in general older adult settings. Great care and consideration needs to take place before a walking aid is issued to the aggressive older adult psychiatric inpatient. Should a balance deficit be identified, the physiotherapist ought to work with the clinical team to agree a consensus on the safest option. Clear and logical documentation is key.

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A replication of a cross-national study of the relationship between elderly suicide rates and urbanization

Modernization is a social and economic process consisting of three interrelated processes of industrialization, urbanization and secularization. The process of industrialization may provide greater economic opportunities in urban areas and facilitate migration of people from rural to urban areas. This process of urbanization may lead to a weakening of ties with family, friends, local religious institutions and original place of residence. Difficulties in adjusting to the new urban environment may increase the risk of suicide and see a rise in suicide rates (Stack, 2000).

A cross-national study (Simpson and Concklin, 1989) and a within-country study (Stack, 1993) have both reported a positive correlation between urbanization and general population suicide rates. However, studies from advanced industrialized countries, including the U.S.A. and Japan, reported a negative correlation (Araki and Murata, 1986; Kowalski *et al.*, 1987; Otsu *et al.*, 2004). Moreover, a large cross-national study reported no such relationship (Zhang, 1998). Stack (1982; 2000) explained these conflicting findings by proposing a curvilinear (quadratic) relationship, whereby the suicide rate would initially increase in the early stages of urbanization due to social disruption following migration from rural to urban areas. Thereafter, the suicide rate would plateau, over several generations, as the new urban dwellers adjust to living in urban areas. This adjustment may ultimately lead to a gradual reduction in the suicide rate. Stack (2000) argued that this curvilinear relationship was supported by a longitudinal study of general population suicide rates in Finland (Stack, 1993). A recent cross-national study also reported this curvilinear (U-

shaped curve) relationship between elderly suicide rates and urbanization only in males (Shah, 2008). The latter study used one-year cross-sectional data on elderly suicide rates and may be open to bias as suicide rates can randomly fluctuate year on year. Therefore, a study using one-year average of five years' data on elderly suicide rates and a more recent data set then used in the latter study was undertaken to replicate the earlier findings.

Data on elderly suicide rates for males and females in the age-bands 65–74 years and 75+ years were ascertained from the World Health Organization (WHO) website (<http://www.who.int/whosis/database/mort/table1.cfm>). For a small number of countries only the raw figures for the number of suicides were available from the WHO website. Suicide rates for these countries were calculated by dividing the number of reported suicides by the population size in the relevant age-band and sex group available on the same website. Data were ascertained for the latest five consecutive years. The one-year average suicide rate was calculated by dividing the sum of suicide rates for the latest five consecutive years by five. The median (range) for the latest year for the suicide rate data was 2005 (1983–2007). Urbanization, in accordance with standard practice in suicide research, was defined as the percentage of the population living in urban areas (Simpson and Concklin, 1989). Data on the percentage of population living in urban areas was also ascertained from the WHO website (<http://www.who.int/countries/afg/en/>) and were for the year 2006.

Curve estimation regression models were used to examine the curvilinear relationship between elderly suicide rates and the percentage of the population living in urban areas fitting the quadratic equation $y = a + bx - cx^2$ (where y is the suicide rate, x is the percentage of the population living in urban areas and a , b , and c are constants).

A full data set for elderly suicide rates and the percentage of the population living in urban areas was available for 85 countries. Table 1 illustrates