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Get to grips with frailty... In line with other developed countries, the percentage of older people in the Irish population is expected to rise over the coming years. Within the older population, a new syndrome known as the "frailty syndrome" is emerging. Frailty may be defined as a biological syndrome, identified by decreased reserves in multiple organ systems and associated with falls, disability, morbidity, mortality and excess healthcare costs (*Am J Med* 2007; 120: 748-53). It has been estimated that only 3-7% of those aged between 65-75 years are frail, but the incidence increases with age, reaching >20% in those aged >80 years and >30% in those >90 years.

Frailty may develop slowly in a stepwise process, with increments of decline precipitated by acute events. Initiating factors include disease, lack of activity, inadequate nutritional intake, stress and/or lack of social engagement. Once the older person becomes frail, there is often a rapid, progressive downward spiral toward failure to thrive and death. However, a **pre-frail condition has also been described, the clinical significance of which is that, if recognised, the frailty syndrome may be reversed** (e.g. by the benefits of a referral for comprehensive geriatric assessment and/or interventions such as exercise, better nutrition and other lifestyle changes including social engagement). Diagnosis of the frailty syndrome may be difficult (e.g. congestive heart failure, polymyalgia rheumatica and Parkinson's disease may or may not coexist with frailty). A recent paper (<http://www.biomedcentral.com/content/pdf/1471-2318-10-57.pdf>) described a frailty instrument (SHARE-FI), created by an Irish research team for use in primary care. **SHARE-FI** was designed to classify subjects as either frail, pre-frail or non-frail, using the following 5 variables: **Exhaustion** (relating to energy to perform tasks in the previous month); **weight loss** (relating to a diminution in desire for food, resulting in reduced appetite); **weakness** (assessing handgrip strength (measured in Kg), using a dynamometer); **slowness** (assessing, for the previous 3 months, the ability to walk >100 metres or climb a flight of stairs without resting) and **low activity** (relating to activities such as gardening, going for a walk). The group used data from a large population-based community survey SHARE (Survey of Health, Ageing and Retirement in Europe; www.share-project.org), recently conducted in 12 European countries to validate the tool. Results identified a prevalence of pre-frailty of 25.8% in females and 14.6% in males, and a prevalence of frailty of 7.3% and 3.1% respectively. The instrument showed a significant correlation between the frailty rating and risk of mortality. The researchers acknowledge that the instrument relies on self-report for 4 of the 5 variables included in the calculation, which may result in unreliable answers, especially in the presence of cognitive impairment. However, it is an easily applied instrument, which may assist healthcare professionals in the identification of frailty / pre-frailty conditions.

[Editor's Note: handgrip strength is increasingly recognised as a predictor of disability, morbidity and mortality in older age. The SHARE-FI requires objective measurement of handgrip in Kg; you can download the instruments (separate tools for females and males) from: <http://www.biomedcentral.com/1471-2318/10/57/additional/>. The Assist Ireland website may prove useful in sourcing a dynamometer for use in clinical practice: http://www.assistireland.ie/eng/Products_Directory/Healthcare_Products/Assessment_Test_Equipment/Pinch_Gauge_Dynamometers/. The NMIC will keep readers posted on all developments in this area, so watch this space!]



Prevent your patients getting snookered by warfarin tablets! The NMIC has received the following tip from a regular reader, following our recent *Therapeutics Today* items on warfarin. When he prescribes warfarin, he notes that patients can appreciate that warfarin comes in different strengths (1mg, 3mg, 5mg). However, frequently they have difficulty remembering which colour is associated with which dose strength. So he advises them that **warfarin tablets increase in value in the same way as snooker balls: brown (lowest value), followed by blue (mid value) and finally pink (highest value)**. He has found that this rule is easily remembered and improves the safety of self-treatment with warfarin! We thank this reader and welcome all other helpful suggestions.



How to achieve a "happy medium" with medications in the elderly

The use of multiple medications (polypharmacy) is common in older adults and is important in ameliorating symptoms and improving and/or extending quality of life. However, such use is also a major risk factor for prescribing problems, adherence difficulties, adverse drug events and other adverse health outcomes. We report on two recent papers that examined ways of dealing with polypharmacy in the elderly.



The first paper systematically reviewed the literature to evaluate the effect of interventions aimed at improving suboptimal prescribing (*JAMA 2010; 304: 1592-1601*). The authors identified the following important steps. **Firstly**, a medication review is essential to identify discrepancies between patients' understanding of what they should be taking, what they actually are taking and what is recorded on the patient files; **they described a "brown bag" review, whereby patients are asked to bring in all of their medicines (prescription, OTC medicines, supplements and any herbal remedies)**. This will potentially assist in evaluating effectiveness (by matching the patient's condition(s) with the medicines currently prescribed) and also compliance with the treatment regimens. Matching can identify not only overuse or inappropriate use of medicines ("mismatches") but also underuse of potentially beneficial medications, which if remedied should improve patient outcome and may allow discontinuation of other medicines. **Secondly**, medications can typically be effectively withdrawn once the decision has been made to do so. However, in order to minimise the risk of exacerbating the underlying disease (e.g. angina) or producing withdrawal symptoms (e.g. benzodiazepines) a slow careful tapering of drug dose may need to be undertaken. **Thirdly**, once a new drug regimen has been introduced, it is usual to discuss the changes with the patient. However, oral counselling alone has been shown to be insufficient in many studies, therefore a combination of written instructions, involvement by family members and/or local healthcare professionals may be needed for some elderly patients. **Finally**, monitoring and follow-up has been shown to be critical in optimising medication use. The authors conclude that a brown bag review should be repeated at regular intervals, either at yearly intervals or at the onset or worsening of conditions such as cognitive decline or falls.



Closer to home, the second paper described an interesting study which evaluated the benefits of medication review in general practice (*IMJ 2010; 103: 236-8*). A dedicated medication review was undertaken in community-dwelling patients (n=50) aged ≥ 65 years who were receiving repeat prescriptions for ≥ 2 medicines. The total number of medications the patient was actually taken was recorded as was the list of medications in the patient's records; medicines not being taken by the patient were removed from the active list but left in the file. Errors in dose or medicines thought to be inappropriate for the individual were identified (using validated sources and tools) and the dose altered or drug stopped as appropriate. A record of each patient's OTC medicines was also compiled and noted in his/her record, separate from the prescription lists. Patients were educated regarding the potential for interaction between OTC and prescription medicines as necessary. The review lasted no more than 10 minutes and medical follow-up was arranged, appropriate to the change(s) in treatment regimen. Study participants also completed a satisfaction questionnaire 4 weeks after the medication review. Results showed that a medicine was stopped in 70% of patients; this translates into a reduction of medications taken from a mean of 6.34 to 5.46. However, the review noted that **92% of patients' records had contained medications not being actually taken by the patients** (mean of 11.14 listed medications vs. 6.34 medications taken prior to review). An error in dose was identified in 32% and an inappropriate medicine was detected in 54% of cases (including long-term benzodiazepines, long-term use of NSAIDs or anti-diarrhoeal agents). The study also noted 56% of patients were taking concomitant OTC medicines. Over 70% patients reported that they felt better and had gained knowledge from the review and 96% said they would like a repeat review. Although this was a small study, the authors suggest that a 10-minute medication review can significantly reduce polypharmacy in elderly patients, can identify inappropriate prescribing and errors in prescribing or self-administration and will ensure that patient records are accurate, all of which contribute to optimal prescribing in elderly patients.