

ADHERENCE TO TREATMENT IN OLDER PEOPLE IN PRIMARY CARE – A NESTED CASE CONTROL STUDY

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Nonadherence with treatment regimens has been associated with an increased number of visits to physicians, hospital admissions, increased length of stay, and increased health services expenditure (McCombs *et al.*, 1994). Factors that may influence adherence are adverse effects, cost of therapy, age, sex, education and marital status (Flack *et al.*, 1995). The elderly are of particular concern in this regard because of their use of multiple drugs, which has been associated with nonadherence (Darnell *et al.*, 1986), and because of their greater vulnerability to undertreatment as well as overtreatment. The socioeconomic status of the patient can also affect the patients ability to comply and could contribute to a poor understanding of the therapeutic role of pharmacotherapy. In Ireland provisions were made in July 2001 to extend free medical care services to all persons aged 70 and over in an attempt to ensure equitable access to medical care.

We undertook a population based nested case-control study in two groups of elderly patients (previously means-tested (new) vs non-means tested (old)), matched for age and gender. We examined whether socioeconomic status (determined by medical card ownership prior to, and after July 2001) affected adherence to new treatment.

A prescription database of all patients aged 70 years or more living in the largest health region in Ireland, the Eastern Region Health Authority (ERHA) was examined. Patients initiating therapy between October 2001 and May 2002 were

identified if they had not received any medications in the previous 3 months, and had joined the medical card scheme at any time up to December 2002 (n=96,398 patients). Adherence was defined as the duration of therapy in the subsequent nine months following the month of initiation of therapy. Data is presented as the median (IQR) number of months of duration of therapy (post initiation) for specific drug classes, and was analysed using a Wilcoxon sum rank test.

Results showed that the new over 70s adhered for longer than the old over 70s on therapies such as antidiabetic treatments [7(5,8) vs 6(1,8) months; p<0.05], antithrombotic agents [7(4,8) vs 6(1,8) months; p<0.0001], beta blockers [7(4,9) vs 6(1,8) months; p<0.0001], ACE inhibitors [7(4,8) vs 6(1,8) months; p<0.0001], statins [7(1,8) vs 6(1,8) months; p<0.0001] and drugs for obstructive airways diseases [4(0,7) vs 2(0,6) months; p<0.001], whereas the old over 70s continued for longer than new over 70s on therapies such as hypnotics and sedatives [3(0,7) vs 1(0,5); p<0.0001] and anti-depressants [3(0,7) vs 2(0,6); p<0.0001].

The results suggest that less deprived elderly were more likely to selectively adhere after initiating therapy particularly in relation to preventative therapy. The more deprived elderly, who are already at high risk of developing disease, may be further disadvantaged by not adhering to therapy in particular preventative cardiovascular medicine, which they would undoubtedly benefit greatly from.

McCombs JS, et al. (1994) *Med Care* 32: 214-26.

Flack JM, et al. (1995) *Eur Heart J* 17(suppl A): 16-20.

Darnell JC, et al. (1986) *J Am Geriatr Soc.* 34: 1-4.