

Do caregivers improve the quality of drug prescribing to older adults with dementia?

Sylvain Pichetti¹, Marc Perronnin¹, Anne Penneau¹

(1) Institute for Research and Information in Health Economics (Irdes), Paris, France

Context

Improving the quality of drug prescribing for seniors with dementia is a major challenge since the risks of iatrogeny from inappropriate prescriptions can have particularly serious consequences for these frail older adults. **Family caregivers**, often involved in coordinating care with health professionals, can impact prescriptions even more when they help their relatives at home. They schedule consultation for them and facilitate the dialogue between seniors and doctors during the consultation (Gillepsie *et al.*, 2013). They also report unexpected and undesirable effects of treatment to physicians (Smith *et al.*, 2015) and may seek information on newly prescribed treatments (Aston *et al.*, 2017). The level of training of **professional caregivers**, particularly whether they have had health training, also has a strong influence on the role of education and support for families (Dreier *et al.*, 2016, Backhaus *et al.*, 2017, Attard *et al.*, 2020).

This paper jointly analyzes the impact of family and professional caregivers on the quality of prescribing measured by eight indicators of potentially inappropriate prescriptions for a population of older adults with dementia.

Data and methods

This study is based on the French *Care* survey. Eight indicators of potentially inappropriate prescriptions were calculated for each of the 1992 seniors aged 60 and over with dementia who are in the sample. Seniors were classified into homogeneous classes according to the level of severity of their dementia. Information on the assistance required by elderly individuals distinguishes between assistance for medical tasks (managing medication intake, scheduling appointments) and assistance for other daily activities. Using this information, we characterized family and professional support for each senior.

Our goal is to estimate the effect of family and professional caregiving on inappropriate prescription. Family and professional caregiving are prone to be endogenous as caregiving is supposed to depend on health status of the elderly and so may be influenced by drug consumptions. We address this problem using instrumental variables in multivariate probits. We estimate the model by Maximum simulated likelihood.

Results

The effect of family help for medical tasks on inappropriate prescriptions is not significant. Similarly, effect of having professional caregivers for medical task is not significant either.

Effects of family caregiving for non-medical task is insignificant for all indicators, with low values. Effect of professional caregiving for non-medical task are positive and significant for the probability to have at least one inappropriate prescription (+29 pct points, pvalue = 0.004), on the probability to have inappropriate prescriptions for mental disorders (+35.7 pct points, pvalue <0.001) while it remains small and insignificant for the probability to have inappropriate prescriptions for non-mental disorders.

Considering the high level of potentially inappropriate prescriptions in France, our results incite to improve initial and continuous training of professional caregivers and find new way of coordinating and managing medical care for elderly people with dementia in France.