Drug Usage and Self-Reported Health Among a Cross-Sectional Population Aged Over 75 Years

G. Bernadotte af Wisborg, C.B. Claesson, O. Lundberg and M. Thorslund

1 The National Corporation of Swedish Pharmacies, Stockholm, Sweden
2 Department of Social Medicine, University Hospital, Uppsala, Sweden
3 Swedish Institute for Social Research, Stockholm University, Stockholm, Sweden
4 Department of Social Work, Stockholm University, Stockholm, Sweden

Summary

This study aimed to describe medicine use in very old age in different social classes, taking into account differences in self-reported health. A cross-sectional interview study design was used. The study population was made up of a nationwide representative sample of the very old in Sweden and included all people aged ≥75 years, earlier interviewed in the Swedish Level of Living surveys. Study measurements were drug use, self-reported health (i.e. symptoms/diseases), and social class. The response rate was 95.4% (n = 537, age range 77 to 98 years). Women accounted for 61% of the total sample; they used more drugs than men mainly because of the large number of male nonusers. No differences could be found with respect to the number of drugs used in different age groups, nor in different social classes. There were some differences in types of drugs used between social classes. When adding symptoms/diseases into a logistic regression model, some significance differences disappeared or became less pronounced.

In conclusion, it was considered necessary to go beyond tabulating the number of drugs or frequencies of medication in order to obtain a complete picture of drug use by older adults. One must consider categories of drugs and types of health conditions. A global health measure was not very useful in predicting drug use, while specific symptoms were related in expected ways. A limitation of the study was reliance on self-reported health and drug use; however, questions about specific symptoms (e.g. pain in shoulder) are less affected by subjective bias, and self-reported drug use is not as much an overestimation of drug use as alternative methods. The results showed that differences between gender, age and social class subgroups could be quite subtle. For social class, differences only emerged when health was controlled for. Finally, age differences in drug use were incompletely accounted for by self-reported health.
In the future the elderly in general, and the very old (referred to in this study as people over 75 years of age) in particular, will account for an increasing proportion of the population in Sweden, as in many other countries.[11]

Importantly, the elderly have been shown to use more medications than other age groups. In 1993, 18% of the Swedish population were 65 years or older and 8% were 75 years or older; these groups consumed 40 and 18%, respectively, of all medicines prescribed in outpatient care, measured by both volume and cost.[2] The proportion of elderly people who use medication is also high. At least 70% of Swedes aged 75 years or older and living in their own home use medicines,[3-6] and more than 80% of the general Swedish population aged 70 years or older purchase prescription medicines at least once each year.[2] Investigators in other countries report an even higher proportion (up to > 90%) of medicine users among the elderly.[7-9] Furthermore, several studies show that elderly people who live in institutions use more medicines than those living in their own homes.[6,7,10-13]

Although some studies have shown no difference in the number of medicines used between different age groups among the elderly,[13] others show that the number of medicines used increases with age.[2,14-16] Lindberg et al.[6] suggest that the latter findings apply only to people living in their own homes; in institutions, those aged 75 and older use fewer medicines than those aged between 65 and 74 years.[17,18]

Results of several studies suggest elderly women use more medicines than elderly men.[2,3,13,16,17,19-21] However, other studies suggest that there is no difference in medicine usage between men and women aged 85 years and older[18] or for those living in institutions.[6,7,22]

The varying results on drug use in the elderly may be due to methodological differences, i.e. varying demographic data (e.g. distribution between men and women, age range of the sample and inclusion of nursing home patients and people living in their own home), different data sources (e.g. medical records, pharmacy records or patients' recall) and whether all drugs or just prescription drugs are taken into account.

Ideally, differences in drug use should be related to differences in health status; differences in drug use between women and men, older and younger people, and people living in institutions and those living in their own homes should be due to differences in their health status. Differences in drug use should at least decrease once health status is controlled for. Health status in the general population and the elderly differs according to social class.[23-28] Retired unskilled workers > 75 years are generally more unwell than other social groups, according to self-reports or performance tests designed to assess functional limitations.[28,29] However, whether differences in health also affect medicine use among those aged 75 years and older is not known; there are no available published studies examining the relationship between social class, self-reported health and drug use in the elderly.

The aim of this study was to assess medicine usage among a nationwide representative sample of elderly people aged 75 years and older in different social classes, taking into account differences in self-reported health. We test the hypothesis that differences in drug consumption in this group are attributable to health status but not to age, gender or social class.

**Study Participants and Methods**

**Participants and Study Design**

We used data from the Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD).[30] The population sample consisted of 563 people aged 77 to 98 years who had previously been interviewed at least once in one of the Swedish Level of Living Surveys. Individuals were traced and interviewed by means of their personal identification numbers.¹ Information on the latest known address of the participants was obtained from the Person

¹ In Sweden all inhabitants are given a unique number consisting of date of birth and 4 additional digits. This number is used in all official communications with authorities.