3.9 Quality of Health Care Delivered to Older Europeans
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Introduction

As populations age, health systems must adapt and develop approaches that meet the needs of frail patients with multiple chronic conditions. Geriatric assessment, prevention, rehabilitation and integrated care are key components of this evolution, in which the role of primary care physicians as case managers is central.

The need for indicators of quality of care delivered to the elderly in health care systems is recognised. The RAND Corporation developed indicators in the frame of the ACOVE project (Assessing Care Of Vulnerable Elders) as a system to evaluate the performance of health care systems (ACOVE Investigators 2001). These indicators were essentially elaborated for specific medical conditions and their measurement requires information from patients records (Wenger et al. 2003). The OECD also selected a set of indicators to measure quality of care at the level of health systems but these are not specific to older populations (Marshall et al. 2004). Recently, indicators of the quality of care delivered in health systems were measured in population-based surveys both in the older population of the USA (Okoro et al. 2005) and in the adult population of countries in the Commonwealth (Schoen et al. 2004). Similar international comparisons are lacking in Europe.

The purpose of this contribution is to describe indicators included in SHARE as a tool to compare the care provided to the elderly in European countries and to describe their relationship with age, gender or subjective health. The selected indicators were designed in order to check the quality of geriatric assessment considering some of its basic elements, without reference to specific diseases, as well as the compliance to clinical guidelines for diseases screening and prevention. Considering that age, per se, is a risk factor for multiple morbidities, frailty and disability, these indicators do not focus on patients with an explicit diagnosis but concern older persons in general.

Measures

Indicators of quality of care integrated in SHARE have been developed with the collaboration of D. Melzer and N. Steel (ELSA project). They are measured based on self-reports and rely on straightforward aspects of medical consultations that are easily recognised by respondents, irrespective of their level of education. They are divided in three groups.

A first set of indicators was measured in respondents who declared that they have a general practitioner; they are indicators of geriatric assessment in primary care. Two of them concentrate on information collected by physicians and advise provided regarding physical activity; they are pertinent in all age categories. Two others concern the anamnesis of falls and the examination of balance by general practitioners; they are particularly relevant in the oldest age categories. One indicator is related to weight control, and another to the medical anamnesis of drugs, either prescribed by other physicians or bought over-the-counter; both are pertinent in all age categories. Respondents were asked whether their general practitioner takes information or gives advice on physical exercise, falls, balance, weight and drugs at each visit, at some visit or never. In this report, we considered as positive answers activities performed at each or at some visits.

A second set of indicators looked at screening and prevention. They concerned all respondents. Flu vaccination in the last year is particularly recommended in persons aged 65 and over; eye examination in the past two years is indicated in older persons owing to
the risk of glaucoma and the increasing prevalence of diabetes with age; mammograms every second year are recommended in women between ages 50 and 70; most guidelines recommend endoscopic examinations of colon / sigmoid from the age of 50 in men and women, with a frequency that varies, and we selected a ten year period as a conservative measure; the search for occult blood in stool is also advocated in the same age group for colon cancer screening.

The third set of indicators purported to study the quality of care in persons affected by a chronic condition. Joints pain was selected because its prevalence is high in populations 50 and over, and because it is essentially based on symptoms recognised by the individual (an alternative would have been hypertension but this firstly requires a medical diagnosis and its detection is by itself a first indicator of quality of care). Questions were limited to individuals who reported joints pain lasting at least six months, in upper or lower limbs, and who spoke to their general practitioner or to any other doctor about it. Physicians are expected to check joints, in some cases to suggest a drug treatment and in all cases to inform of side-effects of anti-inflammatories since many of them are bought over-the-counter. They can also prescribe physiotherapy or exercises and consider the possibilities offered by a specific surgery.

All indicators of quality of care were abstracted from the SHARE drop-off questionnaire. Additional information was available from the interview. Age was expressed in 10 years categories based on the year of birth (age achieved by the end of 2004). Subjective health was evaluated by a single question „Would you say your health is… very good, good, fair, bad or very bad?“ and answers were dichotomised into very good or good versus the three last answer categories.

Analyses of release 0 data from the SHARE maintest were conducted on a group of six countries characterised by a return rate of the drop-off questionnaire of at least two thirds by November 15, 2004 (Austria, Germany, Greece, The Netherlands, Sweden and Switzerland). Quality of care indicators were estimated in the whole data set and analysed in subgroups defined by age, gender and subjective health. At this stage, only bivariate analyses were performed.

Results

1 Geriatric assessment in primary care

Overall, 85% of respondents declared that they have a general practitioner or a doctor they usually turn to for their current health problems. The proportion is significantly associated with age (p<.0001): while 80% have a general practitioner in the first age category, the proportion reaches 91% at the age of 80 and over. Women reported more frequently than men having a general practitioner (87% against 82%, p<.0001) and individuals in fair, poor or very poor health had a usual doctor more often than individuals in good or very good subjective health (91% against 80%, p<.0001).

As shown in Figure 1, the fraction of persons reporting that their general practitioner asks them about the physical activity they have at least at some visits ranges between one half and two thirds, depending on age (p=.02). The proportion of respondents never asked about physical activity is the lowest at the age of 50-54 and the highest at 80 years and over. Only 40% in the first age category have been advised to exercise and, although the proportion is related to the age (p=.009), it does not pass beyond 54% in the oldest group. For both indicators, men seem to discuss physical activity with their primary care
Figure 1: Proportion of persons who have a general practitioner reporting that, at every visit or at some visits, he/she asks about physical activity or tells to get exercise.

Figure 2: Proportion of persons who have a general practitioner reporting that, at every visit or at some visits, he/she asks about falling down or checks balance.
physician more frequently than women (asking for physical activity: p<.0001 and advise to exercise: p=.0002). Individuals in fair, poor or very poor health are also more likely to discuss physical activity (p<.0001 for both indicators).

As can be expected, primary care physicians ask about falls and check balance more frequently in older age groups (Figure 2, p<.0001 for both indicators), which seems appropriate as physical frailty is age dependent. There are no differences between genders. However, a large fraction of respondents (still close to an half at the age of 80+) said that their general practitioner never asks about falls and only 64% of the oldest respondents reported that he or she checks balance at least at some visits. Individuals in good or very good subjective health are less likely to discuss about falls or to have their balance checked (p<.0001).

Weight loss is another manifestation of frailty in the old age and, as such, it is worth monitoring. Overweight is another reason and, owing to its multiple health consequences, it deserves consideration in a substantial proportion of the population aged 50 and over. As illustrated by Figure 3, weight check was more frequently mentioned in the older age groups (p<.0001) but it remained largely unsystematic. Only half of individuals aged 50 to 54 reported that their physician weighs them at least at some visits and, even at the age of 80 and over, one third declared that he or she never controls their weight. Genders do not differ significantly but weight is checked more often in the subgroup characterised by a negative subjective health (p<.0001).

Finally, drugs management is an essential part of geriatric medicine. With frequent multiple chronic conditions, many older persons take more than one drug (cf. Section 3.8 on health services utilisation). All are not prescribed by the general practitioner. Figure 3 shows that the usual physician asks about medication slightly more often in older ages.
groups (p<.02) but, in all age categories, the proportion is one half at most. Genders do not differ significantly and drugs are more frequently discussed, as expected, with individuals in fair, poor or very poor subjective health (p<.0001).

2 Screening and prevention

Flu vaccination in the last year is clearly related to the age (Figure 4, p<.0001), but coverage remains below 50% in all age categories except in the last one (53% at the age of 80+). Women reported more frequently than men a recent flu vaccination (p=.02) and a negative self-reported health is also associated to a higher proportion of vaccinated persons (p<.0001).

The same figure illustrates the increasing proportion, across age categories, of individuals reporting an eye examination in the past two years (p=.0005). It also shows that, in all age groups, at least three persons out of ten did not have their eyes controlled recently. Women mentioned an eye control more often than men (p=.0001) and a negative self-reported health is also positively associated with this indicator (p=.001).

The highest rate of mammograms in the past two years is observed in the 55-59 age group, where it is limited to 64%. The proportion then decreases regularly with age and only half of women aged 65-69 years reported this exam. Women in good or very good subjective health are characterised by higher rates (p<.0001).

In all age categories, the proportion of persons who reported a colono / sigmoidoscopy in the past ten years is low (20% overall). It increases up to the 65-69 age category (25%)
and then remains stable up to the age of 75-79 years \((p=.0002, \text{ Figure } 5)\). Men and women do not differ but a higher proportion is recorded in the subgroup characterised by a fair, poor or very poor health \((p<.0001)\). Screening for occult blood in stool in the last ten years was more often reported than endoscopies but it remains below 50% in all age groups. Here again, the proportion is related to the age \((p<.0001)\) and it is the highest in the 65-69 age category. Gender \((p=.1)\) and self-reported health \((p=.04)\) cannot be considered as associated with this test.

![Graph showing proportions of persons reporting colono/sigmoidoscopy less than 10 years ago or a stool blood test in the last ten years.](image)

**Figure 5** Proportion of persons reporting a colono/sigmoidoscopy less than 10 years ago or a stool blood test in the last ten years.

3 Quality of care in joints pain

Chronic joint pain is related to the age: 31% are affected between 50 and 54 years and 67% at the age of 80+. Women mentioned it more frequently than men (53% versus 40%) and, of course, it is also positively associated with a fair, poor or very poor self-reported health (66% versus 33%). A large majority of respondents who suffer chronic pain discussed it with physicians: the proportion ranges from 80% in the 50-54 years old to 90% at the age of 80+.

In most cases, physicians who heard about such pain checked the joints; there was no differences on this answer by age (Figure 6), gender or self-reported health. In a majority of cases, they suggested a drug treatment. Medication seems more frequently proposed in older age groups \((p=.001)\), in women \((p=.01)\) and in individuals in fair, poor or very poor subjective health \((p<.0001)\). As most anti-inflammatory drugs can be both prescribed and bought over-the-counter, information concerning their side effects should be systematic in case of chronic joint pain. As shown in Figure 6, this was not the case for nearly half of the situations, irrespective of age. A larger proportion of men \((p=.03)\) and of persons in
Figure 6: Proportion of persons who told a doctor about joint pain in upper or lower limbs reporting that he/she checked the joints, suggested a drug treatment for this pain, or told about the possible side effects or risks from anti-inflammatories.

Figure 7: Proportion of persons who told a doctor about joint pain in upper or lower limbs reporting that he/she was sent to physiotherapy or an exercise programme, was told to have surgery or joint replacement, or was sent to an orthopaedic surgeon.

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**Figure 6**

Proportion of persons who told a doctor about joint pain in upper or lower limbs reporting that he/she checked the joints, suggested a drug treatment for this pain, or told about the possible side effects or risks from anti-inflammatories.

**Figure 7**

Proportion of persons who told a doctor about joint pain in upper or lower limbs reporting that he/she was sent to physiotherapy or an exercise programme, was told to have surgery or joint replacement, or was sent to an orthopaedic surgeon.
negative self-perceived health \((p=.01)\) said that side effects have been discussed.

Physiotherapy or an exercise program was prescribed to 61% of cases and differences by age illustrated in Figure 7 are not statistically significant. Men and women present the same proportion and self-reported health does not seem to influence it either.

Finally, 24% of individuals with chronic joints pain who discussed it with physicians were told to have surgery or sent to an orthopaedic surgeon, a proportion that is similar in all age categories. It is not influenced by the age, the gender or the subjective health.

Conclusions

- SHARE is the first database that includes indicators of quality of care to older persons collected with the same questionnaire in the general population of European countries. Its potential for the evaluation of health systems is very substantial, as information on respondents is available on a large variety of dimensions such as health or socio-economic conditions. This information is crucial to understand international differences, as is the expertise cumulated in SHARE and AMANDA working groups where all participating countries are represented.

- For most quality of care indicators, there seems to be room for improvements. While some of them need caution in their interpretation (e.g., weight check may be under-reported because, in some cases, it is performed not by the general practitioner but by a nurse or another health professional who reports to the physician), there is little doubt that the general practitioner, as a case manager, should periodically ask about drugs. From a preventive perspective, both geriatric assessments and screening tests should be generalised.

- In particular, Europeans seem to experience very low rates of colon cancer screening, with only one person out of five reporting an endoscopy in the past ten years. In a recent publication, underuse was described in the US population with a coverage rate that exceeded half of the population at the age of 50+ (Chao et al. 2004).

- Few differences were registered between men and women and a negative subjective health was, in general, associated with higher levels of quality indicators except in the case of mammograms. These higher levels may result from more frequent contacts with the health care system in individuals in fair, poor or very poor subjective health.

- A detailed analysis by country will be the next step of our work based on release 1 data from the SHARE maintest; it will look at the effects of socio-economic variables on the quality of care received, taking advantage of the multidisciplinary nature of SHARE.
References