

7. Quality of healthcare

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Key points arising from this chapter are:

- The quality of healthcare received by ELSA respondents was assessed against pre-defined evidence-based quality indicators for those who reported having been diagnosed with diabetes mellitus, hypertension, ischaemic heart disease, cerebrovascular disease, osteoarthritis, depression, osteoporosis or raised cholesterol; or having problems with balance, falls, vision, hearing, anticoagulation, pain, urinary incontinence or smoking. Indicated care is healthcare that meets the standard described in the quality indicator.
- The proportion of ELSA respondents reporting that they received indicated care varied substantially by condition, from eight-out-of-ten respondents with newly diagnosed heart attack or angina, to only one-in-seven of those with balance problems.
- The health problems presented in this chapter can be divided into three groups according to the quality of care reported by respondents. Over two-thirds of respondents reported receiving indicated care for hypertension, ischaemic heart disease, diabetes, hearing problems and pain. Less than two-thirds but more than one-third received indicated care for diabetes (with an additional risk factor), osteoporosis, vision, incontinence and falls. Less than one-third of respondents received indicated care for problems with balance.
- A high proportion of those receiving healthcare advice from a health professional reported following that advice.
- Few differences in the quality of healthcare were reported by wealthier respondents compared with poorer respondents, which suggests that healthcare for the interventions studied in ELSA is provided equitably to those in need, regardless of socio-economic status. Exceptions were incontinence management and diabetes education.

In wave 1 of ELSA in 2002–03, respondents were asked about diagnosis of all the major illnesses affecting the older population of England, and about symptoms and functional status (McMunn et al. 2003; Steel et al., 2003). These questions were repeated in wave 2 in 2004–05, and in addition, questions about the quality of healthcare received by ELSA participants were included for the first time. The aim of the questions on quality of healthcare in ELSA is to explore the role of healthcare differences as causes of socio-economic differences in illness and disability, and to help determine the critical steps along the trajectory from health to sickness.

Inequalities in health between socio-economic groups have been extensively documented in ELSA and elsewhere (Marmot et al., 2003; US Department of Health and Human Services, 2003). The role that healthcare plays in the pathway from socio-economic conditions to health outcomes is one of the most important scientific questions for ELSA, and is also highly relevant to policymakers in that poor-quality healthcare is potentially remediable. The extent to which ELSA respondents adhere to the advice about healthcare that they report receiving is also presented in this chapter. Adherence is an essential step in the pathway from treatment to improved health outcomes, and has been previously found to vary with socio-economic status (Goldman and Smith, 2002).

Previous attempts to measure quality of healthcare in England have generally used samples drawn from a single healthcare sector, or with a single disease. A system-level view of quality of healthcare is needed to understand the complexity of healthcare delivery, particularly for older people. Older people are major recipients of healthcare, and often receive treatment for several conditions at once, delivered across the boundaries between primary and secondary care, and for some conditions between the public and private sectors.

A recent national review of quality in the National Health Service drew on multiple sources to provide a system-level view, and concluded that there was much variability in quality of care and that independent sources of information were few compared with government sources (Leatherman and Sutherland, 2005). This is the first time that detailed measures of quality of care have been independently measured for a range of conditions on a sample representative of the national population of England.

7.1 Measures

The health module in ELSA wave 2 included approximately 100 questions on quality of healthcare. The majority of these questions concern technical healthcare processes, such as blood sugar monitoring for diabetics or taking a targeted history to guide the management of urinary incontinence. These questions determine whether or not the participant received the healthcare set out in 44 quality indicators (evidence-based care standards). Examples of quality indicators used in ELSA are given in Box 7.1.

Quality of healthcare is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Institute of Medicine, 2001). Good-quality healthcare should be effective, efficient, safe, timely, equitable, and patient-centred. The quality indicators in ELSA were designed primarily to measure effectiveness, and although some also consider safety, timeliness and patient-centred care, these dimensions of quality are not well covered. Equity was not considered in the development and selection of the quality indicators, but the multidisciplinary nature of ELSA allows equity to be considered in the analysis stage.

Box 7.1. Examples of quality indicators used in ELSA

Diabetes mellitus

IF a person aged 50 or older has diabetes, THEN his or her glycosylated haemoglobin or fructosamine level should be measured at least annually.

ALL diabetic persons aged 50 or older should have an annual examination of his/her feet.

Urinary incontinence

IF a person aged 50 or older has new urinary incontinence that persists for over 1 month or urinary incontinence at the time of a new evaluation, THEN a dipstick urinalysis and/or mid-stream urine sample should be obtained.

Pain

IF a person aged 50 or older has a newly reported chronic painful condition, THEN treatment should be offered.

Quality of care can be assessed using measures of healthcare processes, which consider whether treatment adheres to agreed good practice, or by outcome measures, which consider the resulting changes in health status (Donabedian, 1980). There are many causes of changes in health status other than healthcare, and there are many problems in adequately adjusting outcomes for differences in case mix. Processes are also more sensitive measures of quality than outcomes, and more clearly linked to any action that should be taken to improve quality (Mant and Hicks, 1995). For these reasons, the quality indicators in ELSA are measures of process. Quality indicators should be based on robust evidence where it exists, so that their use will be likely to lead to improved health outcomes (McColl et al., 1998).

The quality indicators used in ELSA were developed using the RAND/UCLA method for combining the best available research evidence with expert opinion to assess the appropriateness of treatment (Brook et al., 1986). Indicators from RAND's 'Assessing the Care of Vulnerable Elders' (ACOVE) programme in the US (Wenger et al., 2001) were adapted for use in ELSA as described in detail elsewhere (Steel et al., 2004). A panel of 10 clinical experts in England reviewed 119 quality indicators covering 16 clinical areas, based on the ACOVE set of indicators. Panel members were supplied with literature reviews summarising the evidence base for each quality indicator. The indicators were sent for comment before the panel meeting to UK charitable organisations for older people. The panel rated 102 of the 119 indicators (86%) as valid for use in England. The adaptation was intended for assessment of quality through interviews with patients, an underused source of data about healthcare quality which avoids the problems of extracting data from clinical records (Kirk et al. 2003).

Two further stages were needed in order to use the quality indicators in the ELSA questionnaire. First, the indicators were grouped by the minimum age of the population they refer to, after review of the evidence base. Most indicators apply to the whole population over 50 years, but a minority apply to only those aged over 65. The next stage was to develop and test survey questions which could be used to assess whether quality indicators were

achieved or not. Examples of this matching of survey questions to quality indicators are given in Box 7.2.

Additional questions about interpersonal care were adapted from established surveys. The question about explanation of hypertension was adapted from the Consumer Assessment of Healthcare Providers and Systems (CAHPS), the question about choices in hypertension was adapted from the Foundation for Accountability's (FACCT) Robert Wood Johnson National Strategic Indicators Survey Project, and the questions about training and knowledge in diabetes come from the Medicare Current Beneficiary Survey (MCBS).

Box 7.2. Examples of ELSA questions used to assess quality indicators

Diabetes quality indicator: IF a person aged 50 or older has diabetes, THEN his or her glycosylated haemoglobin or fructosamine level should be measured at least annually.

Corresponding ELSA questions:

Have you ever had a special blood test to see how well your blood sugar was controlled? This test is called a glycosylated haemoglobin, or haemoglobin A1c, or fructosamine. This is a blood test taken at a doctor's surgery or health centre or laboratory.

Have you had this test (glycosylated haemoglobin or fructosamine) performed in the past 12 months?

Urinary incontinence quality indicator: IF a person aged 50 or older has new urinary incontinence that persists for over 1 month or urinary incontinence at the time of a new evaluation, THEN a dipstick urinalysis and/or mid-stream urine sample should be obtained.

Corresponding ELSA questions: *We would like to ask you about incontinence. During the last 12 months, have you lost any amount of urine beyond your control?*

When you had this problem, did it last for more than 1 month?

Have you ever mentioned this problem to a doctor or nurse?

Did a doctor or nurse ask you to provide a sample of urine for testing?

Pain quality indicator: IF a person aged 50 or older has a newly reported chronic painful condition, THEN treatment should be offered.

Corresponding ELSA questions:

Are you often troubled with pain?

How bad is the pain most of the time? Is it [INTERVIEWER: Read out...] 1 mild, 2 moderate, 3 severe?

[If moderate or severe, then asked:] Has this pain started within the past 12 months?

Have you told your doctor or nurse about this pain?

Did your doctor or nurse recommend any treatments for your pain?

Are you currently receiving any treatment for your pain?

How well does the treatment control your pain? [INTERVIEWER: Read out...] 1 Very well, 2 Fairly well, 3 Not very well, 4 Not at all.

The medical conditions in which quality of care was measured in ELSA were selected according to their prevalence and importance as a cause of disability for older people in the Health Survey for England 2000 and their potential for quality improvement. For these medical conditions, we selected only quality indicators that could be used in an interview survey without the use of clinical records.

Data were collected on receipt of recommended care in the following 16 healthcare areas: mobility, vision, hearing, hypertension, ischaemic heart disease, diabetes mellitus, cerebrovascular disease, anticoagulation, cholesterol management, osteoarthritis, osteoporosis, depression, falls, pain, urinary incontinence and smoking.

This chapter presents data from a sample of over half of the above healthcare areas in order to demonstrate the approach taken to measuring quality of healthcare in ELSA and to provide reference tables to show the quality of care reported by the ELSA population for these areas. The percentage of people who receive recommended care for the following health conditions will be presented: mobility, falls, vision, hearing, hypertension, ischaemic heart disease, osteoporosis, pain, urinary incontinence and diabetes. Prevalence of undiagnosed diabetes mellitus and raised blood pressure are key measures of quality of care at population level and are presented in Chapter 5 on biological measures of health.

The numbers of people responding to the questions on quality of care are presented in the tables. Only respondents who reported having a particular condition were asked about their care for that condition, and the base population for each table is described in a note to the table where applicable. Sometimes, several questions are necessary to determine whether the care indicated by a single quality indicator has been received. The proportion of eligible respondents receiving the care indicated by each relevant quality indicator is presented as the summary measure of quality of care for that condition. If there are two or more quality indicators for a condition, the mean of the proportions receiving the care indicated by each quality indicator is presented as the summary.

Unless otherwise stated, the base population used in this chapter is core members of ELSA, excluding those interviewed by proxy ($N=8,688$). Results refer to data collected in the wave 2 interviews during 2004–05.

7.2 Results

Balance

Two hundred and twenty-one respondents (3%) aged 60 or over reported problems keeping balance when walking on a level surface often, very often or always. They were asked questions about the quality of care received for poor balance.

One-in-five of those with balance problems reported that a doctor or nurse had recommended joining an exercise programme or getting physiotherapy to improve walking or balance, and most of these (15% of all with problems) had

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done so (Table 7A.1). Over two-in-five (44%) had been advised to use a stick or 'Zimmer frame'. There was considerable overlap between those joining an exercise programme or physiotherapy, and those using a stick or walking aid. The percentage meeting the care specified in both of the quality indicators was 15%.

Falls

Of those aged 60 years or over who reported more than two falls in the past two years, with a resulting injury that required treatment, nearly half reported that a doctor or nurse had talked with them to try to understand why they fell, and one-third had a balance or walking test (Table 7A.2). Fewer than a quarter received both recommended healthcare interventions. Data for different age groups are not presented separately, due to small numbers. The mean percentage meeting the care specified in at least one of the two relevant quality indicators was 42%.

Vision

Five hundred and ninety-four respondents (7%) reported in wave 1 or wave 2 that they had been diagnosed with a cataract, and also in wave 2 that they were either blind or had poor or fair (as opposed to excellent, very good or good) vision. Only 29 people aged under 60 (13 men and 16 women) reported being blind or having fair or poor vision, and so data are only presented on the 565 aged over 59. Three-fifths reported that a doctor or optician had recommended having cataract removal, and one-third had had cataract surgery (Table 7A.3). The numbers are small but suggest that older women with cataracts were more likely than women aged 60–74 to receive advice to have cataracts removed. No significant variation in care by wealth quintile was seen in the population aged 60 years and over as a whole (Table 7A.4). Numbers were too small to separate out results by sex or age.

Hearing

The percentage of respondents aged 65 or over reporting difficulty following a conversation if there was background noise, or rating their hearing as poor or fair (as opposed to excellent, very good or good), was 45%. Half of these had told a doctor or nurse of the problem, of whom three-quarters were referred for a hearing test and two-thirds were recommended to use a hearing aid (Table 7A.5). Those aged 75 and over were more likely to be recommended a hearing aid than those aged 65–74. Of those recommended to use a hearing aid, 83% received one and were taught how to use it (Table 7A.6). No significant variation in care by wealth quintile was seen (Tables 7A.7 and 7A.8).

Hypertension, ischaemic heart disease and anticoagulation

Three-quarters of those recently reporting hypertension were advised to take medication, whereas one-third reported that hypertension had been adequately explained to them and that they had been given choice about how to treat their high blood pressure (Table 7A.9). There was no clear pattern of variation in

any of the measures of quality of care for hypertension by wealth quintile (Table 7A.10).

Of those newly reporting diagnosed angina or myocardial infarction in 2004–05, the percentage taking recommended anticoagulation (blood-thinning medication) is high: 95% of those who were recommended to take medication said that they were currently taking it (Table 7A.11).

Forty-six people reported taking warfarin, and of these, 96% had had the recommended blood test (INR) in the past 12 weeks and 80% in the past 4 weeks (data not shown in table due to small numbers).

Osteoporosis

Of those reporting diagnosed osteoporosis in wave 1 or wave 2, three-fifths had been recommended to take medication, nearly all within the recommended time period (Table 7A.12). Data for men and women are not presented separately, as the number of men reporting osteoporosis was small, but the percentage receiving recommended care did not vary by more than a few percentage points between men and women, or between age groups. Again, nearly all of those reporting being recommended treatment also reported taking it. There was no gradient in care for osteoporosis by wealth quintile (Table 7A.13).

Pain

Three hundred and fifty-seven respondents (4%) reported being often troubled by moderate or severe pain that started in the past 12 months (excluding those with knee or hip pain and a diagnosis of osteoarthritis, as they were separately asked about pain as part of osteoarthritis care). Three-out-of-four had told their doctor or nurse about their pain. Of these, three-quarters were recommended to take treatment, but only two-fifths felt that this treatment controlled their pain very or fairly well (Table 7A.14). Given the numbers involved, the evidence is not strong for variation in treatment by age.

Urinary incontinence

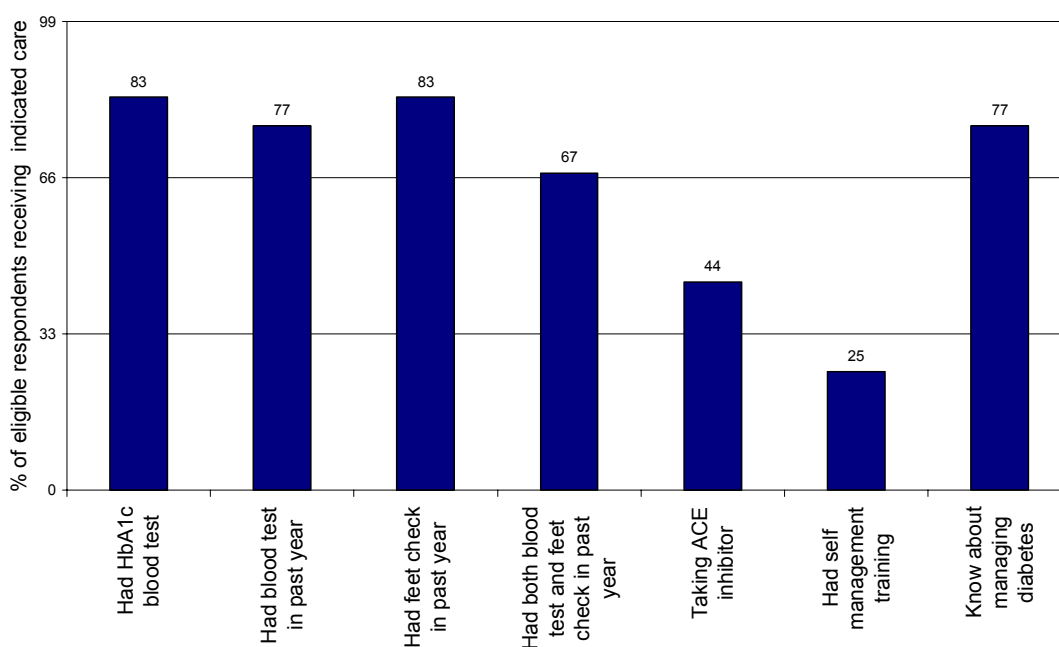
Eight hundred and sixty-six respondents (10%) reported losing urine beyond their control for more than 1 month in the previous 12 months. Of these, 530 (70% of men and 57% of women) had mentioned the problem to a doctor. There was generally little difference between age groups in receipt of recommended care, except for a doctor or nurse asking whether urine was lost on sneezing or laughing. Nine-out-of-ten women aged 52–59 reported that they were asked this question, compared with only two-thirds of those aged over 74. The percentage receiving recommended care ranged from 22% to 71% for individual quality indicators. Out of all the quality indicators for incontinence, the highest rate was reported for urine testing (71%) (Table 7A.15). The percentages receiving all recommended care were 15% for women and 9% for men (13% for men and women combined).

Analysis by wealth showed an unusual pattern of better quality of care for targeted history taking and urine testing being reported by those in the poorer wealth quintiles (P values for trend are 0.02 and 0.03) (Table 7A.16).

Diabetes

Around four-fifths of respondents with diabetes reported receiving a blood test in the past year, with a similar proportion reporting receiving a foot check. Two-thirds of diabetics reported receiving both of these interventions in the past year (Figure 7.1). Lower levels of receipt of indicated care were reported by those aged over 74 than by younger groups (Table 7A.17). Under half of those with at least one additional risk factor reported either discussing or receiving treatment with an ACE inhibitor or A2 receptor blocker (Table 7A.19).

Figure 7.1. Receipt of indicated care for diabetes



Much lower numbers reported receiving training in self-management than reported indicated care for the more established blood and foot checks. Only 25% reported receiving some training in self-management of diabetes, with particularly low levels in women aged 75 and over (Table 7A.17).

There was a highly significant trend for receiving training in living with diabetes, and having good self-rated knowledge about diabetes, to be reported more often by wealthier respondents. The receipt of indicated blood and foot checks for diabetes, in contrast, showed no relationship with wealth (Table 7A.18).

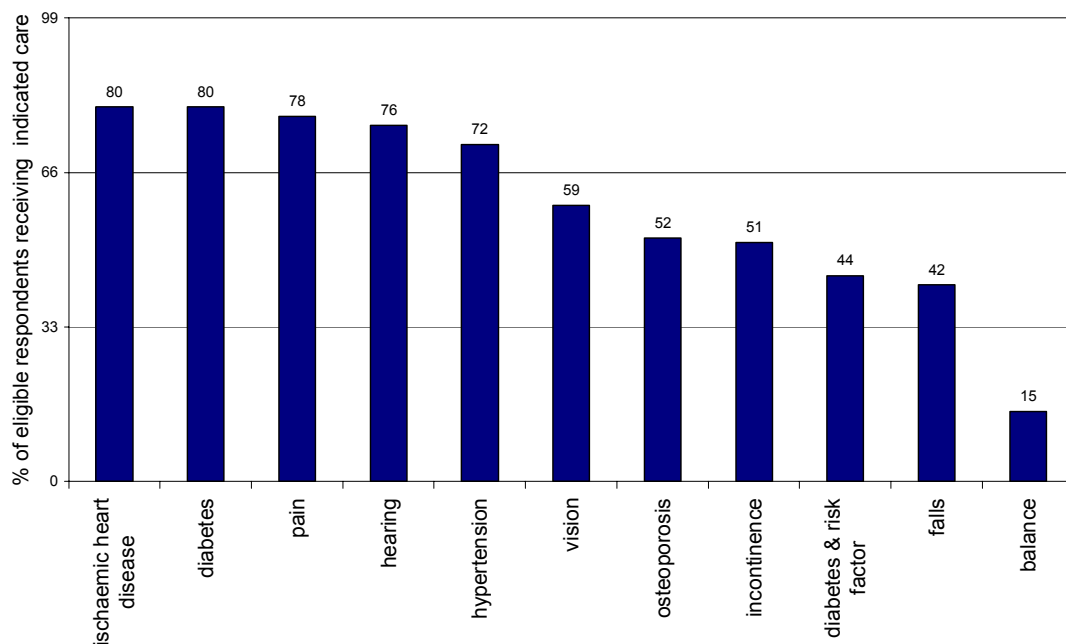
Overall quality of care by condition

On average, 59% of respondents received appropriate care for their health problem, and quality varied greatly by condition. Indicated care is healthcare

that meets the standard described in the quality indicator, and the highest level of indicated care reported was 80%. This of course also suggests that one-in-five people are going without indicated care in this particular instance, and the number going without indicated care differs for different healthcare interventions and conditions.

The conditions studied can be broadly divided into three groups, according to the summary measure of quality of care reported. More than two-thirds of respondents reported receiving indicated care for diabetes, anticoagulation in ischaemic heart disease, management of hearing difficulties, hypertension and pain. Indicated care for those with diabetes with at least one additional risk factor, osteoporosis, urinary incontinence, repeated falls with injury, and vision difficulties was received by between a third and two-thirds of those potentially eligible. The lowest percentage of indicated care was reported for poor balance, with only 15% reporting that they had received indicated care (Figure 7.2 and Table 7A.21).

Figure 7.2. Receipt of indicated care, by health condition



Adherence to recommended care

High rates of adherence to recommended care were reported for nearly all conditions studied. The only condition where reported adherence was below 65% was vision, where the take-up of cataract surgery was 56% (Figure 7.3 and Table 7A.21).

Quality of care and wealth

There was little difference in the quality of care reported by those in different wealth quintiles. The exceptions to this general rule of equitable provision of healthcare were diabetes education and care for some aspects of urinary

Figure 7.3. Adherence to recommended care, by condition
 (% of those recommended treatment by their doctor or nurse)

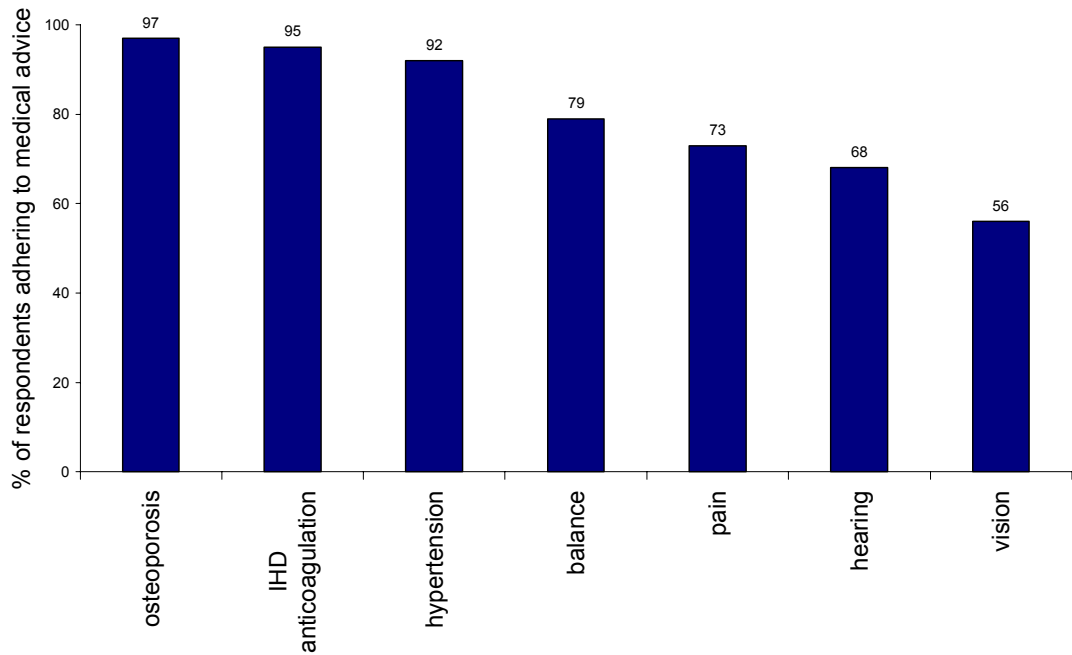
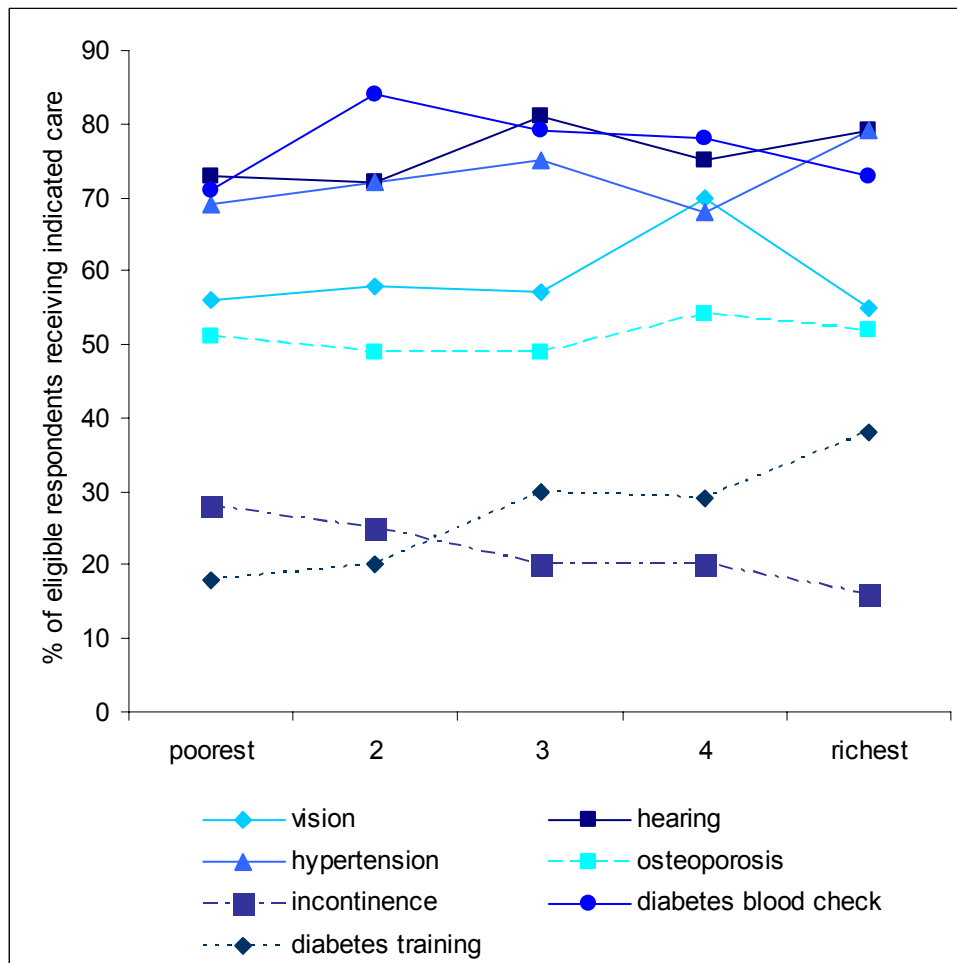


Figure 7.4. Trends in quality of care, by age-adjusted wealth quintile



incontinence. The questions on training and knowledge about managing diabetes showed a clear trend to greater training and self-rated knowledge in wealthier respondents (P-values for trend are both <0.001) (Figure 7.4 and Table 7A.18). Quality as measured by taking a targeted history and by asking for a urine sample from respondents with urinary incontinence showed a contrary trend, being better in poorer respondents (P-values for trend are 0.02 and 0.03) (Figure 7.4 and Table 7A.16).

7.3 Conclusions

Three main conclusions can be drawn from the data presented above on quality of healthcare reported in ELSA. First, many people are not receiving healthcare that they would benefit from, although quality of care is substantially better for some conditions than others. Second, reported adherence to healthcare recommendations is generally high. Third, there is little variation in the quality of healthcare reported by respondents in different wealth quintiles.

Quality variation by condition

Quality of care was generally better in the conditions that are of greater public health importance – namely, hypertension, ischaemic heart disease and diabetes. This is not surprising, given the amount of attention that clinicians and policymakers have given to improving the quality of care for these conditions in England over several years. It is worth noting that the quality scores for some indicators in diabetes were low, in particular for those diabetics with an additional risk factor. It is reassuring that most people were being offered treatment for deafness and pain, although most people with pain reported that the treatment did not control their pain.

The less glamorous conditions of urinary incontinence, recurrent falls and poor balance received low quality scores. These conditions are not big killers in the general population, but are responsible for much illness and misery, particularly for older people, and many opportunities are being missed to improve care.

The variation in quality of care seen in ELSA is similar to the variation found in a larger study of quality of care in the US (McGlynn et al., 2003). The US study reported that only half of the participants received indicated care, which is broadly similar to our overall mean of about 60%.

Adherence to advice

Most of those who were aware that the doctor had recommended medication were taking it, with the exceptions of those suffering from pain, which was often poorly controlled, and cataract surgery, where the respondent may have chosen not to have surgery or alternatively may still be waiting for surgery at the time of the survey. However, these high rates should be interpreted with caution, as those who are adhering to therapy are possibly more likely to remember having the treatment recommended in the first place.

Quality variation by wealth

The remarkably few differences in the quality of healthcare reported by wealthier respondents compared with poorer respondents contrast with the usual pattern seen for prevalence of most health conditions in ELSA, where higher rates are generally seen in poorer groups of the population. The reasons for this are not clear, but may be due to the lack of financial barriers to receiving healthcare in the National Health Service. It may also be that a gradient is there, perhaps in particular demographic subgroups, but that it was too small to be apparent with the comparatively small numbers of respondents that were asked many of the quality-of-care questions.

The only healthcare interventions with a clear trend for wealthier respondents to report better-quality care were for training in living with diabetes and for having good self-rated knowledge about diabetes. The development of these expert patient skills may be an example of a relatively new area of healthcare being adopted first by the wealthier groups in the population, and it will be interesting to see how this changes in future waves of ELSA.

Limitations

The absolute levels of indicated care reported should be treated with caution due to the methods used to measure quality of care, in particular uncertainties around the accuracy of self-reports about quality of care. We have no way of checking the accuracy of reports within ELSA at present. The ELSA quality indicators were derived from the 'Assessing the Care of Vulnerable Elders' project, and researchers on that project found that their interview data were comparable with clinical notes data, and for some indicators it appeared that respondents remembered higher rates of appropriate interventions than had been documented in the notes (Steel et al., 2004).

Although the absolute levels of care are subject to a degree of uncertainty for the reasons given above, there is no reason to believe that the accuracy of self-reports differs systematically from one health condition to another. The strength of these data are that they allow the quality of care for different health conditions to be compared, and they show that some health conditions are currently managed better than others in England. The approach used also allows comparisons to be made about the quality of healthcare received by different socio-economic groups in the population of England. It is, of course, important to remember that summary measures may conceal problems with particular aspects of care.

Whilst there may be individual patients for whom the recommended care would not be appropriate, or who may not correctly remember the care they received, at a population level the approach taken gives a reasonably clear indication of health system performance.

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