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Trends in social class inequalities in the use of health care services within the Spanish National Health System, 1993–2006

Laia Palència · Albert Espelt ·
Maica Rodríguez-Sanz · Katia B. Rocha ·
M. Isabel Pasarín · Carme Borrell

Abstract

Objective   The aim of this study was to analyse the trends and socio-economic inequalities in the use of health care services in Spain between 1993 and 2006.

Methods   A study of trends was performed using data from six Spanish National Health Surveys (1993, 1995, 1997, 2001, 2003 and 2006). Sample sizes were 21,061; 6,396; 6,396; 21,066; 21,650 and 29,478, respectively. The following dependent variables were analysed: having visited a general practitioner (GP) or specialist in the previous 2 weeks, having visited a dentist within the previous 3 months and having visited a gynaecologist, having used the emergency services or having been hospitalised in the previous year. The main independent variable was social class, classified as manual or non-manual occupation. For each service, age-standardised proportions of use were calculated by survey year, sex and social class, and indices of relative (RII) and absolute (SII) inequality were computed. Trend tests were applied.

Results   An increase in the proportion of use was observed for all services, particularly emergency services. Individuals from manual classes were more likely to visit the GP and emergency services than those from non-manual classes. Conversely, those from non-manual classes were more likely to use specialised services. This trend was most notable for dentist visits. Social inequalities did not change significantly during the study period.

Conclusions   Despite the increase in the use of health care services, the relationship between social class and the use of these services has remained stable throughout the study period. Achieving equity in the use of specialised care services is still a challenge for universal health care systems.

Keywords   Health care use · Inequalities · Social class · Trends · National Health System

JEL Classification   D63 · I14 · I18

L. Palència · A. Espelt · M. Rodríguez-Sanz ·
M. Isabel Pasarín · C. Borrell
CIBER de Epidemiología y Salut Pública (CIBERESP),
Madrid, Spain

L. Palència (✉) · A. Espelt · M. Rodríguez-Sanz ·
K. B. Rocha · M. Isabel Pasarín · C. Borrell
Agència de Salut Pública de Barcelona, Plaça Lesseps 1,
08023 Barcelona, Spain
e-mail: lpalenci@aspb.cat

L. Palència · A. Espelt · M. Rodríguez-Sanz · K. B. Rocha ·
M. Isabel Pasarín · C. Borrell
Institut d'Investigació Biomèdica Sant Pau (IIB Sant Pau),
Barcelona, Spain

L. Palència · M. Isabel Pasarín · C. Borrell
Universitat Pompeu Fabra, Barcelona, Spain

A. Espelt
Departament de Psicobiologia i Metodologia de les Ciències de
la Salut, Universitat Autònoma de Barcelona, Bellaterra
(Cerdanyola del Vallès), Spain

Introduction

An equitable service is one that matches access to need, regardless of ability to pay [1]. Socio-economic inequalities in the use of health care services increase the burden of disease, exacerbate social inequalities in health and generate adverse social and financial effects [2]. Universal coverage attenuates socio-economic inequalities in health care [3], and so most countries that have universal health care systems show little or no evidence of variation in the use of primary care according to socio-economic group [1, 4–7] once differential need is

taken into account. However, socio-economically advantaged people are more likely to see a specialist [1, 5, 8], especially when private insurance or private care options are offered [6].

In 1986, the Spanish Parliament passed the General Health Care Act, which approved the creation of a National Health System (NHS) [9]. In addition, a gradual process of devolution of health care to Spain's autonomous communities took place between 1981 and 2002 [10], giving rise to a decentralised system with universal coverage for primary, specialist and hospital care. A small fraction of health care services, such as dental or optical care, are not provided by the Spanish public health care system, and users are required to pay part of the cost of medicines. Spanish public health care services are of high quality, although there are long waiting times to receive outpatient specialised care (from 20 to 30 days on average), in contrast to primary care (one day on average) [11]. For this reason, around 10% of the Spanish population subscribes to private health insurance, mainly in order to obtain shorter waiting times in specialist care and greater comfort in case of hospitalisation [11]. Regardless of insurance status, most GP visits and emergency treatments occur within the NHS, while almost 30% of specialist medical visits are made to private specialists [12].

Most developed countries have established nearly universal systems of health care coverage for their populations, including comprehensive packages of medical services [6]. However, pressure on health care funding has led many countries to introduce changes that threaten the universality of their welfare systems [1]. User fees, for example, have been found to have negative effects on equity, as they discourage the use of services by poorer groups [13] and create a proportionally greater burden on heavy users, such as the elderly or those in greater need. Due to the current financial situation in Spain, co-payments may be implemented in some services, and so monitoring is necessary to changes in patterns of equality.

Although socio-economic inequalities in the use of health care services have been well studied for specific time periods, the evolution of these inequalities has not been investigated in detail [14] or only for specific hospital specialties [15, 16]. In Spain, they have been analysed only at a local level [17] or using short series of data [18]. Thus, the aim of this study was to analyse trends and socio-economic inequalities in the use of health care services in men and women in Spain between 1993 and 2006.

Methods

Design, study population and information sources

A study of trends was performed using data from six Spanish National Health Surveys conducted in 1993, 1995, 1997, 2001, 2003 and 2006. The methodology used in these surveys is described in detail elsewhere [19]. Briefly, the study population consisted of non-institutionalised men and women, aged 16 years or above, living in Spain in the years of the surveys. Subjects were selected by means of a stratified multistage sampling design, and the information was collected through personal interviews in the subjects' homes. All surveys were performed throughout the year in question, except for the 1993 survey, which was performed within a single month (February).

Survey sample sizes were 21,061 individuals in 1993; 6,396 in 1995; 6,396 in 1997; 21,066 in 2001; 21,650 in 2003; and 29,478 in 2006. Due to their relatively small sample sizes, data from the 1995 and 1997 surveys were analysed jointly; this approach has been used by the previous studies [18].

Variables

Health services

The six variables related to the use of health care services were as follows: having visited a general practitioner (GP) in the previous 2 weeks; having visited a specialist in the previous 2 weeks; having visited a dentist in the previous 3 months; having visited a gynaecologist in the previous year for a reason other than pregnancy or childbirth; having used the emergency services in the previous year; and having been hospitalised at least for one night within the previous year.

Data were collected in the same way in all survey years, by asking the respondent whether they attended the service in question in the time period in question, except for the visits to the general practitioner and specialist. In the 1993–2003 surveys, data on visits to general practitioners and specialists were derived from two questions: 'Have you consulted a physician, for a health problem or illness, in the last 2 weeks?' and 'What was the specialty of the last physician you visited?' We created dichotomous variables that compared individuals whose last visit was to a GP to those who had not visited a physician, and that compared individuals whose last visit was to a specialist to those who had not visited a physician. In the 2006 survey, subjects were asked how many GP and specialist consultations they had had within the previous 4 weeks, and two variables were created to compare those who had had any visit to those who had not. Due to the change in the format of the question, the 2006 variables were used to study inequalities but not trends in proportions.

Social class

The respondent's social class was assigned as 'manual worker' or 'non-manual worker', on the basis of their

current or last occupation. Respondents who had never had an occupation were classified according to the social class of the head of the household.

Occupational social class is a measure of socio-economic position based on a graded hierarchy of occupations ranked according to skill [20]. Socio-economically disadvantaged groups have worse results in a number of health indicators [21]. Moreover, socio-economically disadvantaged people not only have worse health but may have poorer access to health services when they need them [6]. That is the reason why manual and non-manual social classes need to be considered as separate groups.

Other Covariates used were age (categorised into ten-year groups), self-perceived health status and the presence of at least one chronic disease as a measure of need for health care. Health status was assessed using the question: 'Within the last 12 months would you say your health was very good, good, fair, bad or very bad?', and the results were categorised as 'good or very good' and 'less than good'. The chronic diseases common to all survey years and included in this analysis were hypertension, hypercholesterolaemia, diabetes, asthma or chronic bronchitis, heart disease, stomach ulcer and allergy. For dentist visits, oral and dental health was chosen as the measure of need. People who suffered from tooth decay and bleeding gums or had loose teeth were classified as having 'poor oral health'; all others were classified as having 'good oral health'.

Data analysis

All analyses were performed separately for men and women. Sampling weights derived from the sample design [19] were used in all calculations.

The age-standardised proportion of use (using the direct method [22] with the 2006 survey population as the reference population) of all health services was computed for each survey year and for each social class. Robust Poisson regression models [23] were fitted to test for association between the health services variables and social class for each sex and survey year. These analyses were adjusted for age, perceived health status and the presence of chronic diseases to take into account the different health care needs of the different socio-economic groups. As a result, we obtained the Relative Index of Inequality (RII) and the Slope Index of Inequality [24] (SII), which can be interpreted as the proportion ratio and absolute difference in the proportion at the extremes of the social class spectrum [25], respectively. These indices have the advantage that they take into account both the population size and the relative socio-economic position of groups. We achieved this by regressing the proportion of use of health services of the socio-economic groups on a very specific measure of

their relative position, the proportion of population that had a lower position in the social hierarchy [25]. The RII corresponded to the exponential of the coefficient for social class (non-manual versus manual) which indicates inequality if it is statistically significantly higher than 1. The SII corresponded to the difference between the estimated proportions (non-manual minus manual).

The *P* value reported for trend in relative inequality is that for the term for interaction between the survey year (introduced as a continuous variable) and social class when data from all years were analysed together.

Results

The distributions of data from the surveys with respect to the independent variables are shown in Table 1. The percentage of individuals younger than 25 years decreased during the study period while that of individuals older than 75 years increased, which reflects ageing of the population. Approximately 60 per cent of the individuals interviewed belonged to the manual classes. The rate of missing data for social class was higher in the earlier years and mainly in women. The proportion of men who had good self-perceived health was consistently higher than that of women during the entire study period.

The percentage of people who had visited the GP in the 2 weeks prior to the interview increased for both sexes and for both classes, at least from 2001 to 2003 (Fig. 1, Table 2). The proportion of individuals who had visited a GP was higher among women and manual workers (Table 2). When taking need for care into account, manual workers were still more likely to have visited the GP compared to non-manual ones (RII = 0.71, 95% CI: 0.56–0.89 in 1993 and RII = 0.84, 95% CI: 0.72–0.99 in 2006), and the results were very similar in women (Table 2). The relationship (relative and absolute) between GP visits and social class was quite stable, except for the 1995 survey, in which no association was observed (Table 2, Fig. 2).

An increase in the proportion of people who visited the specialist was also observed (Fig. 1, Table 2). In men, the proportion of use of specialist care services was quite similar for both classes, although significant inequalities appeared when need for care was taken into account (RII = 1.36, 95% CI: 0.89–2.08 in 1993 and RII = 1.44, 95% CI: 1.13–1.85 in 2006). The proportion of women who had seen a specialist was slightly higher in the non-manual classes for all surveys, and this relationship became more apparent when need for care was taken into account (RII = 2.08, 95% CI: 1.47–2.94 in 1993 and RII = 1.40, 95% CI: 1.19–1.66 in 2006). Except for a peak among women in the first year, 1993, social class inequalities

Table 1 Demographic characteristics (percentages) of the subjects interviewed in the 6 survey years

|	Men					Women				
	1993 $N = 10{,}023$	1995–1997 $N = 6{,}186$	2001 $N = 10{,}173$	2003 $N = 10{,}561$	2006 $N = 14{,}459$	1993 $N = 10{,}710$	1995–1997 $N = 6{,}597$	2001 $N = 10{,}870$	2003 $N = 11{,}079$	2006 $N = 15{,}019$
Age group (years)										
16–24	20.8	20.7	16.8	14.7	13.0	18.6	18.0	15.0	13.4	11.9
25–34	20.1	19.9	20.5	21.3	21.5	18.2	18.7	18.9	19.4	19.3
35–44	16.0	16.6	18.3	19.4	20.1	15.5	15.5	17.4	18.2	18.6
45–54	15.0	13.5	14.9	15.3	16.0	14.8	13.7	14.4	14.8	15.6
55–64	14.1	14.1	11.8	12.1	12.5	14.7	14.3	12.0	12.2	12.8
65–74	9.9	9.4	11.1	10.2	9.1	12.5	13.1	14.2	12.3	11.4
≥75	4.1	5.8	6.6	7.0	7.8	5.7	6.7	8.1	9.7	10.4
Social class										
Non-manual	38.3	39.0	37.3	40.8	42.0	35.3	36.3	35.0	40.3	37.3
Manual	58.6	59.4	57.5	58.2	56.3	53.9	57.4	59.7	58.6	60.6
Missing	3.1	1.6	5.2	1.0	1.7	10.8	6.3	5.3	1.1	2.1
Self-perceived health status										
Poor	26.5	28.2	24.5	27.0	27.4	36.1	36.5	36.0	36.8	39.4
Good	73.2	71.6	75.2	73.0	72.6	63.7	63.4	63.8	63.2	60.6
Missing	0.3	0.2	0.3	0.0	0.0	0.2	0.1	0.2	0.0	0.0
Presence of chronic diseases										
None	70.5	68.3	67.2	66.5	58.6	67.6	65.4	63.4	63.4	55.5
One or more	28.3	29.4	32.3	33.5	40.7	31.3	32.6	36.0	36.6	43.9
Missing	1.2	2.3	0.5	0.0	0.7	1.1	2.0	0.6	0.0	0.6
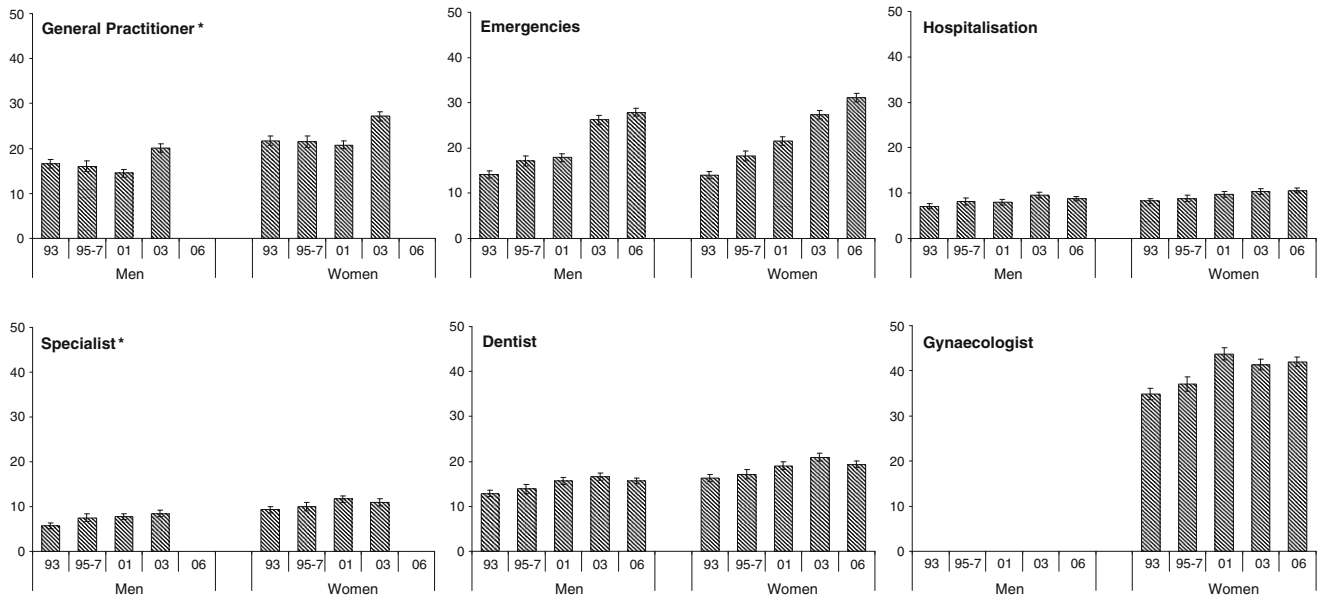
Fig. 1 Age-standardised proportion (and 95% confidence interval, %) of people who used health care services by sex and survey year. All the *P* values of the tests for a trend in proportion of use were ≤0.001. *year 2006 is not shown because the survey questions changed that year

Table 2 Use of health care services (age-standardised proportion and 95% confidence interval, %) by social class, Relative Index of Inequality (RII and 95% confidence interval, non-manual compared to manual) and Slope Index of Inequality (SII and 95% confidence interval, non-manual compared to manual) by sex and survey year

Men				
1993	1995–1997	2001	2003	2006
General practitioner (previous 2 weeks)				(previous 4 weeks)
Non-manual 13.8 (12.4–15.3)	14.6 (12.8–16.5)	13.0 (11.8–14.3)	17.5 (16.2–18.9)	25.3 (24.0–26.6)
Manual 18.0 (16.8–19.3)	16.9 (15.5–18.4)	15.6 (14.5–16.7)	22.2 (20.9–23.5)	29.3 (28.1–30.6)
RII (Age + Need) 0.71 (0.56–0.89)	0.86 (0.67–1.11)	0.75 (0.59–0.94)	0.75 (0.60–0.92)	0.84 (0.72–0.99)
SII (Age + Need) −6.1 (−10.3 to −1.9)	−3.0 (−8.1 to 2.1)	−4.1 (−7.5 to −0.7)	−4.9 (−8.7 to −1.2)	−4.8 (−9.1 to −0.4)
Specialist (previous 2 weeks)				(previous 4 weeks)
Non-manual 5.8 (4.9–6.9)	7.3 (6.1–8.7)	7.9 (6.9–9.0)	8.4 (7.4–9.5)	13.7 (12.8–14.7)
Manual 5.5 (4.8–6.3)	7.6 (6.6–8.7)	7.4 (6.7–8.2)	8.6 (7.7–9.6)	12.7 (12.0–13.6)
RII (Age + Need) 1.36 (0.89–2.08)	1.38 (0.92–2.06)	1.37 (0.97–1.93)	1.29 (0.87–1.91)	1.44 (1.13–1.85)
SII (Age + Need) 3.8 (−1.6 to 9.1)	5.0 (−1.7 to 11.6)	4.4 (−0.7 to 9.5)	3.4 (−2.2 to 9.0)	6.2 (1.6 to 10.8)
Dentist (previous 3 months)				
Non-manual 14.4 (13.2–15.7)	16.5 (14.9–18.3)	18.5 (17.1–19.9)	18.2 (17.0–19.5)	17.6 (16.6–18.7)
Manual 11.9 (11.0–12.9)	12.0 (10.9–13.3)	13.8 (12.9–14.8)	15.1 (14.2–16.2)	14.2 (13.4–15.0)
RII (Age + Need) −[a]	1.81 (1.42–2.32)	1.73 (1.41–2.12)	1.45 (1.15–1.83)	1.52 (1.21–1.92)
SII (Age + Need) −[a]	9.6 (5.5 to 13.8)	9.4 (5.7 to 13.1)	6.5 (2.2 to 10.9)	7.8 (3.2 to 12.3)
Emergencies (previous year)				
Non-manual 12.3 (11.1–13.6)	15.3 (13.7–17.0)	15.6 (14.3–16.9)	22.3 (20.9–23.8)	25.8 (24.5–27.1)
Manual 15.4 (14.4–16.6)	18.3 (16.9–19.8)	19.6 (18.4–20.8)	29.1 (27.7–30.5)	29.5 (28.3–30.7)
RII (Age + Need) 0.69 (0.55–0.88)	0.90 (0.72–1.13)	0.75 (0.61–0.91)	0.69 (0.57–0.83)	0.90 (0.76–1.05)
SII (Age + Need) −13.1 (−21.7 to −4.5)	−4.3 (−13.8 to 5.2)	−13.6 (−22.9 to −4.4)	−19.8 (−29.5 to −10)	−7.1 (−17.6 to 3.4)
Hospitalisation (previous year)				
Non-manual 6.0 (5.1–7.0)	7.5 (6.3–8.8)	6.5 (5.6–7.4)	8.5 (7.6–9.4)	8.1 (7.4–8.9)
Manual 7.7 (7.0–8.5)	8.5 (7.5–9.6)	8.8 (8.0–9.6)	10.5 (9.7–11.4)	9.3 (8.7–10.0)
RII (Age + Need) 0.81 (0.57–1.16)	1.15 (0.80–1.66)	0.70 (0.50–0.96)	0.88 (0.63–1.21)	0.98 (0.71–1.37)
SII (Age + Need) −4.1 (−11.2 to 2.9)	1.9 (−3.1 to 6.9)	−5.3 (−10.3 to −0.4)	−1.7 (−6.0 to 2.5)	−0.2 (−3.4 to 3.1)

Women				
1993	1995–1997	2001	2003	2006
General practitioner (previous 2 weeks)				(previous 4 weeks)
Non-manual 18.5 (16.9–20.2)	19.9 (17.9–22.1)	17.8 (16.4–19.4)	23.0 (21.5–24.5)	31.2 (29.8–32.8)
Manual 23.3 (22.0–24.7)	22.2 (20.6–23.9)	22.5 (21.3–23.7)	29.9 (28.6–31.4)	37.7 (36.5–39.0)
RII (Age + Need) 0.73 (0.60–0.89)	0.93 (0.76–1.15)	0.76 (0.64–0.92)	0.70 (0.60–0.83)	0.80 (0.72–0.9)
SII (Age + Need) −7.8 (−12.8 to −2.9)	−1.6 (−6.5 to 3.3)	−7.1 (−12.1 to −2.1)	−9.8 (−14.4 to −5.1)	−8.1 (−12.2 to −3.9)
Specialist (previous 2 weeks)				(previous 4 weeks)
Non-manual 10.6 (9.4–12.1)	10.1 (8.7–11.9)	12.0 (10.8–13.4)	11.5 (10.4–12.8)	19.0 (17.9–20.2)
Manual 8.0 (7.1–9.0)	9.9 (8.8–11.2)	11.6 (10.7–12.6)	10.4 (9.5–11.4)	17.5 (16.7–18.4)
RII (Age + Need) 2.08 (1.47–2.94)	1.38 (0.98–1.96)	1.32 (1.00–1.74)	1.50 (1.10–2.05)	1.40 (1.19–1.66)
SII (Age + Need) 9.2 (4.0 to 14.3)	4.5 (−0.5 to 9.6)	4.6 (−0.1 to 9.3)	5.7 (0.8 to 10.6)	6.2 (2.8 to 9.7)
Dentist (previous 3 months)				
Non-manual 19.7 (18.3–21.3)	19.6 (17.9–21.5)	21.5 (20.0–23.0)	25.0 (23.5–26.5)	21.6 (20.4–22.8)
Manual 14.5 (13.5–15.6)	15.9 (14.6–17.2)	17.4 (16.4–18.5)	18.2 (17.2–19.3)	18.1 (17.2–19.0)
RII (Age + Need) −[a]	1.57 (1.27–1.95)	1.53 (1.28–1.83)	1.88 (1.55–2.28)	1.40 (1.18–1.66)
SII (Age + Need) −[a]	10.0 (5.1 to 15.0)	9.4 (5.3 to 13.6)	16.6 (11.1 to 22.0)	8.3 (4.0 to 12.6)
Gynaecologist (previous year)				
Non-manual 39.3 (37.3–41.4)	41.5 (38.9–44.2)	48.5 (46.3–50.9)	45.1 (43.1–47.1)	45.5 (43.8–47.3)
Manual 32.6 (31.0–34.2)	34.6 (32.6–36.7)	41.2 (39.6–42.9)	38.9 (37.4–40.5)	39.8 (38.5–41.1)
RII (Age + Need) 1.46 (1.29–1.64)	1.43 (1.25–1.62)	1.40 (1.28–1.54)	1.36 (1.21–1.52)	1.33 (1.21–1.46)
SII (Age + Need) 12.9 (8.6 to 17.1)	10.5 (6.5 to 14.5)	11.5 (8.1 to 15.0)	10.0 (6.0 to 14.0)	9.1 (5.9 to 12.3)
Emergencies (previous year)				
Non-manual 13.2 (11.9–14.6)	16.4 (14.7–18.2)	19.4 (18.0–20.9)	24.3 (22.9–25.8)	28.5 (27.1–29.9)
Manual 14.7 (13.7–15.8)	19.2 (17.8–20.7)	23.1 (21.9–24.3)	29.6 (28.3–30.9)	32.7 (31.5–33.9)
RII (Age + Need) 0.93 (0.73–1.18)	0.92 (0.74–1.15)	0.85 (0.72–1.01)	0.82 (0.70–0.96)	0.90 (0.79–1.02)
SII (Age + Need) −2.0 (−9.0 to 5.0)	−3.2 (−11.9 to 5.4)	−7.5 (−15.5 to 0.5)	−10.2 (−18.2 to −2.1)	−6.4 (−14.1 to 1.2)
Hospitalisation (previous year)				
Non-manual 8.5 (7.5–9.7)	7.7 (6.6–9.0)	9.4 (8.5–10.5)	9.9 (9.0–10.9)	9.8 (9.0–10.7)
Manual 8.4 (7.6–9.2)	9.7 (8.7–10.8)	10.2 (9.4–11.0)	10.7 (9.9–11.5)	11.0 (10.3–11.7)
RII (Age + Need) 1.08 (0.79–1.49)	0.76 (0.54–1.07)	1.04 (0.79–1.37)	1.03 (0.78–1.36)	0.98 (0.77–1.25)
SII (Age + Need) 0.9 (−2.8 to 4.7)	−2.8 (−6.5 to 0.8)	0.6 (−3.4 to 4.7)	0.2 (−1.6 to 2.1)	−0.2 (−3.4 to 2.9)

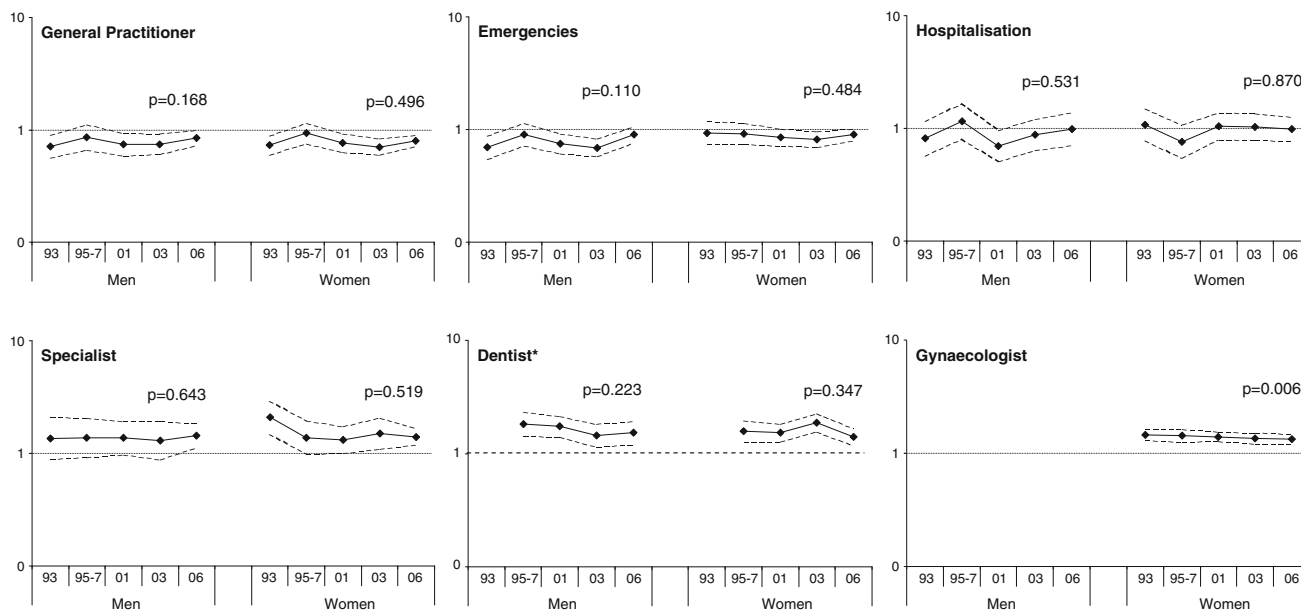[a] Oral health status was not available for 1993

Fig. 2 Relative Index of Inequality (age- and need-adjusted, non-manual compared to manual) and 95% confidence interval by sex and survey year. *P* indicates the *P* value for the test for a trend in inequalities. *year 1993 is not shown because data on oral health were not available for that year

(relative and absolute) were quite stable throughout the entire period of the study (Table 2, Fig. 2).

More modest increases were observed in the proportion of gynaecologist and dentist visits. In all surveys, non-manual classes had a higher probability of having seen a gynaecologist in the previous year (RII = 1.46, 95% CI: 1.29–1.64 in 1993 and RII = 1.33, 95% CI: 1.21–1.46 in 2006) and of having seen a dentist both in men (RII = 1.81, 95% CI: 1.42–2.32 in 1995–1997 and RII = 1.52, 95% CI: 1.21–1.92 in 2006) and in women (RII = 1.57, 95% CI: 1.27–1.95 and RII = 1.40, 95% CI: 1.18–1.66 in 2006). Of all services, relative inequalities were most marked for dentist visits. Relative and absolute inequalities in gynaecologist visits decreased marginally but steadily, while inequalities in dentist visits did not follow any clear trend (Table 2, Fig. 2).

The use of emergency services showed the most marked increase during the study period: the proportion of people who had used emergency services increased from 14% in 1993 to around 30% in 2006 (Fig. 1). The proportion of users was significantly higher among manual classes for almost all surveys and for both sexes, although when need for care was taken into account, this difference became statistically non-significant for some but not all surveys. Absolute inequalities tended to increase in the sense that manual classes used more emergency services, especially among women (SII = −2.0%; 95% CI: −9.0 to 5.0 in 1993 and SII = −6.4%; 95% CI: −14.1 to 1.2 in 2006).

A slight increase in the rates of hospitalisation was observed during the study period. Although the percentage of hospitalisations was usually higher in the manual classes, when need for health care was taken into account, the higher rate of use by less wealthy classes was only maintained among men in 2001 (RII = 0.70; 95% CI: 0.50–0.96 and SII = −5.3% 95% CI: −10.3 to −0.4). No trends in relative or absolute inequalities were observed (Table 2, Fig. 2).

Discussion

Overall, an increase in the use of all health care services occurred during the study period, with the most pronounced increase being observed for emergency services. Despite this general increase, inequalities in use remained stable. In general, manual social classes were more likely to use primary care and emergency services, while more advantaged classes continued to use outpatient specialist care services more than manual classes. The only service not covered by the NHS (dentist) showed the highest inequalities.

Strengths and weaknesses of this study

The main strength of this study is that it contains information for several surveys, which were performed in large representative samples of the Spanish population.

Moreover, the trend obtained for socio-economic inequalities in the use of health services will allow for monitoring of possible changes in these inequalities.

A possible limitation of this study is that we compared the levels of use among socio-economic groups once their need was taken into account, but we could not check whether their use matched their real need. Regarding visits to general practitioners and specialists, in 2006 both the format of the relevant question and the recall period changed. However, we believe that this would not affect the magnitude of inequalities to a great extent, as they are consistent with those observed in the previous years.

Trends in the use of health services

In general, an increase in the proportion of use occurred for all services. In Spain, primary care reform was initiated in 1984 and implemented gradually. The reform focused on team work as a practice and aimed to increase accessibility, comprehensiveness, coordination of care and patient satisfaction [26]. Thereby, the reform may have improved the quality of the primary care as well as expanded its sphere of action by not focusing exclusively on demand but also incorporating preventive measures, which could in part explain the increase in use.

However, other factors may influence the increasing use of health services since the greatest increase in the proportion of visits occurred for emergency services. Approximately 60% of visits occurred at public hospitals and 30% at other public facilities, and this proportion remained relatively stable during the study period, despite the large increase in the proportion of visits. Increases in the use of hospital emergency services are usually interpreted as resulting from ageing of the population, their easy access, confidence in hospital care, delays in elective care or the culture of immediacy [27]. According to our data, the same increase in proportion of visits occurred in all age strata, so ageing does not seem to fully explain this observation and it may result from a combination of other factors. The general perception is that a considerable proportion of cases could have been dealt with by other health care services [28], and the most commonly proposed solution is the implementation of policies to promote access to primary care. Some authors have argued that an increase in the use of primary care emergency services does not lead to a reduction in the use of hospital emergency services [29], and our results seem to support this assertion. Besides questions such as the seriousness or the type of self-diagnosis, knowledge of the existence of primary care emergency services has been found to be a strong determinant of the use of these services [30]. Thus, it is possible that policies or campaigns based on improving awareness of primary care emergency services would be more effective than just improving accessibility to them. Some of the consequences of the overuse of hospital emergency services include poor health care continuity, poor quality of care due to saturation of these services and an increase in health care costs [30]. Moreover, if individuals from manual classes use this service heavily, as observed in this study, this poor health care continuity and poor quality of care are likely to affect them more acutely.

Trends in social class inequalities

Inequalities in the use of different services remained quite stable during the study period. A system with universal health care coverage has the ability to reduce most inequalities in access to care [3]. Moreover, the fact that the Spanish health care system is not generally based on co-payments (except for medicines and services not covered by the NHS) makes it accessible regardless of an individual's financial situation. In addition, the reform of primary care appeared to have improved equality in the distribution of health services [26, 31], although this is not completely supported by our study. In fact, the reform aimed to improve the efficiency of the entire health system by improving the delivery of primary care, and systems in which primary care has a central role to achieve improved equality [32].

In this study, we continue to observe social class inequalities in the use of specialist outpatient services. Inequalities in specialist services were observed in all countries examined in a multi-country study [6] despite the often very different characteristics of their health systems, as well as in a review performed in countries with universal health systems [1]. The same review also found little or no evidence of variation in the use of primary care by socio-economic group [1] after adjusting for differential need. In Spain, the general practitioner is the point of access to specialist health care, so in theory it is not possible to see a public specialist without a referral. However, in other countries that use the same system, individuals with a higher level of education have been found to be able to bypass primary care to reach specialists more often than those with a lower level of education [4]. Another possible explanation for the presence of these inequalities could be that in Spain people with higher socio-economic position are more likely to have an additional private health insurance [11]. Although the limited sample size in some categories prevented us from evaluating effect modification, inequality remained substantial when we adjusted our models for insurance status (results not shown). Given that sales of private health insurance are undergoing significant growth, one could expect an increase in inequalities in the use of specialist health services. Although this does not yet appear to be the case, the role that health insurance status

plays in creating inequalities in Spain will need to be studied in more detail. Moreover, as some authors have noted, the growth in provision of health services by the private sector may lead to a systematic neglect of the public sector [33], and the quality of a national health system that is mainly directed at poorer individuals might be expected to deteriorate [34].

In this study, manual workers used more primary care services and used more emergency services than non-manual workers. Possible explanations are that there is unmeasured need for care among manual classes, due to undiagnosed chronic diseases for example, or that they may need not only curative care, but also other kinds of more personal attention. Conversely, non-manual classes are more able to provide themselves with normal informal care [2] and choose a specialist doctor instead of a general practitioner through their supplementary private insurance [35]. Emergency services may be used more by manual classes because of problems with other services' visiting hours [36] or to avoid waiting times in the public specialist care.

Slight, but statistically significant decreases in inequalities were observed in annual gynaecologist visits. It has been observed that countries with population-based screening programmes achieve reduced socio-economic inequalities in screening [37]. In Spain, population-based breast cancer screening programmes have existed since the 1990s, and both population-based and non-population-based cervical screening programmes are being initiated at regional level [38]. These far-reaching preventive actions may have influenced the decrease in inequalities in gynaecologist visits.

As mentioned above, few studies have analysed the trends in inequalities in the use of health services. In Spain, no trends in inequalities have previously been observed either at a local [39] or national level [18]. In Sweden, in the context of changes in the organisation and delivery of health care and increasing user fees, inequalities in the use of health services seemed to increase [14]. In Finland, inequalities in access to elective surgery persist only for certain procedures, mainly because the private sector is the biggest provider of these services [16], while variation in waiting times across socio-economic groups in England appears to have been reduced [15].

Other issues for discussion and future research

In Spain, users pay 40% of the cost of prescribed medicines, except for pensioners and specific groups of patients, as well as for some classes of drugs used in the treatment of chronic diseases. Whether there is inequality in access to some types of treatment [34] and whether there are health consequences are things to take into consideration.

In addition, ongoing changes in surgery practices, such as the increased use of ambulatory surgery services or home hospitalisation, have not been investigated as a possible source of inequality. Finally, although inequality in the use of health services has been well studied in Spain, little research has been carried out to explore the differences in the quality of the services received according to social class.

Conclusions

Despite the increase in the use of health care services, the relationship between social class and the use of these services has remained stable throughout the study period. Socio-economically disadvantaged individuals show poorer results across a range of health indicators. In this sense, a universal health care system guarantees that the most vulnerable groups are protected. Policies or measures being planned should not alter this universality [40]. Equity in specialised care is still a challenge for universal systems.

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