

Re-examining access points to the different levels of health care: a cross-sectional series in Austria

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Background: There is high variation in service utilization behaviour, health equity and outcomes among countries based upon the organization of access to primary and secondary care levels. Austria is a country with universal health coverage and access without clear delineation between access to primary and secondary care. The aim of this study was to investigate development of access points to the Austrian system over time and subsequent utilization. **Methods:** The databases used were the Austrian Health Interview Surveys 2006/2007 and 2014, including 15 747 and 15 771 persons, respectively. Descriptive analysis of health services utilization behaviour and demographic factors were conducted. Logistic regression models were applied. Furthermore, differences between the two periods are shown. **Result:** Utilization of all services assessed was high in 2014 when compared to 2006/2007. Between these periods, a 6–7% increase in use of secondary care services was found. There was a 10.8% increase in access to specialist care services and 4.1% increase in hospital outpatient visits, each without prior General Practitioner (GP) visits. The largest increases were found in those groups that had previously demonstrated the lowest utilization behaviour of accessing specialist consultations and consultations without a prior GP visit. **Conclusion:** Despite the lack of change to the health care system or access to care, there was an increase in utilization of secondary care services, with a lower percentage of patients seeking direct GP consultation. This is concerning for systems development, cost containment and quality of care, as it demonstrates a possible trend shifting away from primary care as initial access point.

Introduction

The organization of access to the various levels of the health care system of a given country leads to variability in utilization patterns, health equity and health outcomes.¹ The literature generally describes access to health care as consisting of three dimensions: physical accessibility, financial affordability and acceptability of health services by the population^{2–4}; the first, physical accessibility, conveys that all people can obtain the health services they actually need in terms of geographical and barrier-free accessibility, as well as open hours. Such accessibility includes necessary facilitation, communication and transportation pathways that allow those aged or with disability to reach an appointment. The second, financial affordability, is influenced by the health financing system, as well as household income, and includes the ability of a respective person to make use of a needed health service without financial hardship. The final component of access to health care is acceptability of the health services by the population, and this can be low if a certain service is ineffective or has a bad reputation. In brief, good physical accessibility, acceptability and financial affordability through universal health coverage, are key factors to substantially improve health care for a population.^{3–6} In addition, scientific literature over recent decades show that the particular organization of the primary care sector has, among other benefits, a huge impact on the purposeful utilization of those health services actually needed for specific health complaints.^{7–11} A strongly developed primary care

sector, as defined by the expert panel on effective ways of investing in health (EXPH), commissioned by the European Commission, should ‘play a central role in the overall coordination and continuity of people’s care’.⁷ The objective of such a primary care sector is to protect patients from getting lost in the increasingly complex health care system, which can lead to harm for the patient, unnecessary or multiple diagnostic tests, over-treatment or wrong treatment strategies.^{7–11} Literature shows that countries with universal access to a health care system with well-developed primary care and a coordination function (e.g. gatekeeping), have a lower rate of avoidable hospitalizations due to chronic diseases, as well as an overall lower mortality rate for chronic diseases.^{8,11–14}

Individuals in developing countries often lack the physical accessibility, as well as financial affordability, to directly access the health care system, and this leads to severe unmet medical needs. Meanwhile, countries such as the USA lack universal health coverage, leading to considerable challenges in health equity for American patients and overall health outcomes.^{15–17}

Austria is a country with universal health coverage and access, but no clear demarcation line for access between primary and secondary care.^{18–20} Access points were first assessed in the years 2006 and 2007 and were, together with a short description of the Austrian health care system, published elsewhere.¹⁸ In this previous publication, it became obvious that the overall utilization of all kind of services assessed were high, particularly the utilization of secondary care services. Additionally, access to secondary care services without

consultation of GPs was assessed: it was found that 15% of patients visited a specialist working in the ambulatory sector, nearly 9% consulted an outpatient department and about 8% were hospitalized, each without a concomitant GP visit. As health environments are dynamic, re-examining the same population over a period provides important insights in trends of changing utilization behaviour. The main aim of the present study was to investigate the use of access points to the Austrian health care system over time. Thus, re-examination and assessment of similar data from the year 2014 was performed and compared with the data from the year 2006/2007. Moreover, demographic factors were taken into account to provide greater depth with regard to utilization behaviour and relevant changes to get insights in trends of changing utilization.

Methods

The databases used for this secondary analysis were of the Austrian Health Interview Surveys (ATHIS) 2006/2007 and 2014, both carried out by Statistics Austria.^{21,22} The ATHIS is based on the European Health Interview Survey (EHIS).²³ The survey focuses on health status, health determinants, health care utilization, socio-demographic and socio-economic background characteristics. The methods for the Austrian Health Interview Survey and the secondary analysis of the 2006/2007 data were previously described in depth.^{18,20} In brief, the interviews were conducted face-to-face by specially trained interviewers using computer-assisted personal interviewing. Data of 15 747 persons were eligible for the analysis (63.1% response rate).

For the Austrian Health Interview Survey 2014 the methodology was quite similar; however, in contrast to the 2006/2007 survey, which was face-to-face interview based, the 2014 survey was conducted primarily via computer-assisted telephone interviewing. Questions relevant for this study were the same in both ATHIS.

The ATHIS 2014 was carried out from October 2013 to June 2015. The sample was stratified for region, and for each Austrian NUTS-3 region a sample size of 462 subjects (Viennese regions: 560 subjects) was contacted, resulting in a gross sample size of 38 768 subjects. Of those, 21 343 subjects initially refused to participate. Another 1594 subjects who initially declared their interest to participate, could not be reached or refused the telephone interview. Twenty-five persons abandoned the interview, and the data of 35 participants was insufficient. In the end, a net sample of 15 771 subjects were included in the survey, for a response rate of 40.7%. To increase the response rate, subjects were repeatedly reminded and provided gift vouchers as incentive.

Data were weighted according to geographic region, age, sex, family situation, migration background and education level.

Health care utilization variables

The health care utilization variables taken into account were the same as published for the 2006/2007 ATHIS data and are described in depth elsewhere.¹⁸ In brief, access points to primary care were assessed with the question, if participants visited a GP within the last 12 months at least once. GP visits included presentation to the doctor in his/her office, home visits and medical telephone consultations. Accompanying a child or another family member or arranging an appointment did not count as consultation for the GP or any other access point. Further access points assessed were specialist consultation, outpatient department consultation, including emergency room visits, and any hospital stays (day-clinic as well as overnight stays), all within the 12 months prior to the interview. Specialists were identified as physicians (excepting GPs) such as gynaecologists, urologists, ophthalmologists, dermatologists, specialists for internal medicine, orthopaedics, ear-nose-throat specialists, working in his or her own practice in the

ambulatory sector. Utilization of specialists was noted if the participant consulted at least one of the above-described disciplines at least once within the prior 12 months. The variables for specialist consultation without GP visit within the same timeframe, outpatient department visit without GP visit within the same timeframe, and hospital stay without GP visit within the same timeframe were all built by taking 'yes' answers regarding the different secondary care services into account, as well as 'no' answers regarding GP consultation.

Explanatory variables

In addition to the demographic variables used for the ATHIS 2006/2007, namely age, sex, highest educational level, country of origin and living in Vienna as the only metropolis in Austria. Further, the variable country of origin was clustered into three groups: Austria, European Union (EU) countries except Austria and other countries. As Croatia is part of the EU as of 2013, in the ATHIS 2014 data it is counted as such in contrast to the 2006/2007 data. Other explanatory variables were neither used for the 2006/2007 nor for the 2014 dataset.

Statistical analysis

All analyses were conducted for the 2006/2007 and for the 2014 dataset, respectively, by using the statistic software package SPSS Statistics 24.0. First, participants' demographic characteristics were calculated. Results were presented in absolute and relative numbers. Descriptive analysis regarding the health services utilization behaviour and the explanatory variables were conducted by means of cross-tabs. For all these calculations, differences between the two assessment periods are shown.

For table 2 percentages and absolute numbers of all participants with all consultations at a GP/specialist/outpatient department/hospital within the past 12 months before the survey were presented. For table 3 percentages and absolute numbers of participants with a consultation at a specialist/outpatient department/hospital within the past 12 months before the survey and no concomitant GP visit were shown. This means that denominators for both years and all (sub-)groups of table 3 are found in table 2. Regarding the statistical significance of the results of the comparison between the two surveys a chi-square test was applied.

For the 2014 dataset, logistic regression models were additionally used, in which specialist without GP consultation, outpatient department without GP consultation, and hospital stay without GP consultation were defined as dependent variables consecutively. In each regression model all explanatory variables were taken into the model simultaneously. The results of all regression models are presented as odds ratios with 95% confidence intervals. Nagelkerke's R^2 is presented as a measure of model-fit.

Ethical considerations

The Ethics Committee of the Medical University of Vienna, Austria approved the secondary analysis for the ATHIS 2006/2007 data as well as the secondary analysis for the data of the ATHIS 2014 (EC # 770/2011 and EC # 2211/2015).

Results

In general, the utilization of all services assessed remained similarly high in 2014 when compared to 2006/2007, with an observed increase in the utilization of secondary care services. By 2014, there was an observed utilization rate for the population of 74.4% for specialist consultations, 24.9% for hospital outpatient department visits and 23.3% for hospital stays (table 1). Overall results of service utilization yield that there was an observable increase of about 7% in the utilization of specialists and hospital outpatient departments between 2006/2007 and 2014 (table 1) as

Table 1 Participants' demographic characteristics and service utilization

Group	Subgroup	Year		Difference
		2006/2007 n (%)	2014 n (%)	
All		15 474 (100)	15 770 (100)	
Sex	Female	8021 (51.8)	8100 (51.4)	-0.4%
	Male	7453 (48.2)	7670 (48.6)	+0.4%
Age group	15-34	4667 (30.2)	4650 (29.5)	-0.7%
	35-54	5661 (36.6)	5530 (35.1)	-1.5%*
	55-74	3707 (24.0)	4116 (26.1)	+2.1%*
	75 and older	1439 (9.3)	1474 (9.3)	+0.0%
Highest level of education	Primary	4188 (27.1)	3669 (23.3)	-3.8%*
	Secondary	9836 (63.6)	10 337 (65.5)	+1.9%*
	Tertiary	1450 (9.4)	1764 (11.2)	+1.8%*
Country of origin	Austria	13 025 (84.2)	13 069 (82.9)	-1.3%*
	EU	856 (5.5)	1680 (10.7)	+5.2%* (Croatia in EU since 2013)
	Others	1593 (10.3)	1021 (6.5)	-3.8%*
Vienna	Yes	3142 (20.3)	3284 (20.8)	+0.5%
	No	12 332 (79.7)	12 486 (79.2)	-0.5%
GP consultations	Yes	12 195 (78.8)	12 022 (76.2)	-1.6%*
All specialist consultations	Yes	10 425 (67.4)	11 728 (74.4)	+7.0%*
Gynaecologists	Yes	4494 (29.0)	4666 (29.6)	+0.6%
Urologists	Yes	1561 (10.1)	2049 (13.0)	+2.9%*
Ophthalmologists	Yes	4121 (26.6)	5033 (31.9)	+5.3%*
Dermatologists	Yes	2189 (14.1)	3854 (24.4)	+10.3%*
Internal specialists	Yes	2418 (15.6)	3400 (21.6)	+6.0%*
Neurologists	Yes	na (counted as other specialists)	1084 (6.9)	na
Orthopaedics	Yes	1742 (11.3)	2319 (14.7)	+3.4%*
ENT specialists	Yes	1586 (10.2)	2121 (13.5)	+3.3%*
Other specialists	Yes	1232 (8.0)	2963 (18.8)	+10.8%*
Hospital outpatient department visit	Yes	2880 (18.6)	3934 (24.9)	+6.3%*
Hospital stay	Yes	3527 (22.8)	3680 (23.3)	+0.5%

Comparison 2006/2007 and 2014.

'*' means different at a significance level $P < 0.05$.

well as an overall increase in the utilization of the secondary care services (specialists, hospital outpatient departments and hospital stays) without concomitant GP visit (table 3). Moreover, a slight decrease in GP visits among nearly all demographic groups was found over this time.

The group with the highest overall GP utilization, those aged 55 years and older, showed a decrease of nearly 10% in terms of utilization during this period (table 2). Only in those persons aged 15-34 years a slight increase in GP utilization could be observed.

The increase in specialist utilization was observed to be significant with use of ophthalmologist, dermatologist, specialists in internal medicine and other specialist care (table 1).

Increase in specialist utilization was witnessed in all demographic groups, aside from those with tertiary educational level (table 2). Specialist consultation was highest among females and the elderly in both 2014 as well as 2006/2007. Meanwhile, groups with relatively low utilization behaviour in 2006/2007, including males, younger persons, persons with primary level of education, persons not living in Vienna and persons born in Austria and other countries than the EU, showed the highest increase in 2014 (table 2). A very large increase of 16.2% in utilization was found in persons aged 75 and older (table 2).

With regard to hospital outpatient department visits, a rise in the utilization frequency for all groups could be shown, again with the highest increase for older persons and persons with primary level of education, with about 12 and 9%, respectively (table 2). Hospital stays were similar in 2014 compared to 2006/2007, with a slight increase for younger persons and persons living in Vienna (table 2).

With regard to secondary care service utilization without a GP visit within the same timeframe, this sort of utilization increased for all three types of service in 2014. Specialty consultation increased to 18.8%, with 14.9% for hospital outpatient department visits and 12.2% for hospital stays (table 3). The greatest increase in

specialist consultations without GP visit was observed for those groups that had demonstrated the lowest such specialty consultations in 2006/2007, namely those persons aged 55 years or older (with a nearly 10% increase in utilization), persons with primary level of education, and persons born in other countries than EU countries (both over 6% increase).

The situation for outpatient department visits without GP visit was similar, but with an even higher increase in rates for those persons aged 75 years or older, persons with primary level of education, persons living in Vienna, and persons born outside the EU (>15.3%) (table 3). Due to this increase, persons born outside the EU was the group with the highest frequency of outpatient department visits without concomitant GP visit with 24.0% in 2014 (table 3). In contrast, a decrease of 6.6% for persons with tertiary educational level was found to be the group with the lowest frequency of such utilization (table 3).

Again, the highest increases for hospital stays without GP visit could be observed in persons aged 55 years and older, and additionally for persons born in EU countries, except Austria. Meanwhile, a decrease was shown for persons with secondary and tertiary educational levels (table 3).

The detailed results of the multivariate regression model are presented in the Supplementary table S1. In brief, the results show that the older consume more health services as well as the upper social-economic stratum goes more frequently directly to the specialists and as being healthier uses less hospital care. Persons borne in a country outside the EU visit more frequently an outpatient department directly (Supplementary table S1).

Discussion

This cross-sectional series demonstrates that the utilization of all health care services, independent of the level of care, is unchanged

Table 2 Percentage of participants with all consultations at a GP/specialist/outpatient department/hospital within the past 12 months before the survey

Group	Subgroup	GP consultations % (n)			Specialist consultations % (n)			Outpatient department visits % (n)			Hospital stays % (n)		
		2006/2007	2014	Difference	2006/2007	2014	Difference	2006/2007	2014	Difference	2006/2007	2014	Difference
All		78.8 (12 195)	76.2 (12 022)	-1.6%*	67.4 (10 425)	74.4 (11 728)	+7.0%*	18.6 (2880)	24.9 (3934)	+6.3%*	22.8 (3527)	23.3 (3680)	+0.5%
Sex	Female	81.8 (6561)	78.8 (6383)	-3.0%*	79.8 (6400)	84.9 (6876)	+5.1%*	18.9 (1364)	25.2 (2042)	+6.3%*	24.3 (1950)	23.4 (1899)	-0.9%
	Male	75.6 (5634)	73.5 (5639)	-2.1%*	54.0 (4025)	63.3 (4852)	+9.3%*	18.3 (1516)	24.7 (1892)	+6.4%*	21.2 (1577)	23.2 (1781)	+2.0%*
Age group	15-34	71.5 (3335)	75.9 (3529)	+4.4%*	62.0 (2892)	69.1 (3215)	+7.1%*	19.2 (897)	24.6 (1145)	+5.4%*	18.1 (843)	20.7 (965)	+2.6%*
	35-54	75.2 (4258)	73.5 (4066)	-1.7%*	65.1 (3684)	69.8 (3859)	+4.7%*	17.1 (969)	20.6 (1141)	+3.5%*	19.7 (1113)	18.7 (1033)	-1.0%
	55-74	88.2 (3269)	77.9 (3206)	-10.3%*	75.7 (2806)	81.3 (3348)	+5.6%*	19.6 (728)	28.4 (1167)	+8.8%*	27.6 (1022)	27.8 (1146)	+0.2%
Highest level of education	75 and older	92.6 (1333)	82.8 (1221)	-9.8%*	72.4 (1043)	88.6 (1306)	+16.2%*	19.9 (286)	32.6 (481)	+12.7%*	38.2 (549)	36.4 (536)	-1.8%
	Primary	83.8 (3509)	78.6 (2884)	-5.2%*	65.1 (2728)	75.3 (2763)	+10.2%*	19.7 (826)	28.6 (1049)	+8.9%*	26.1 (1092)	26.4 (968)	+0.3%
	Secondary	77.4 (7609)	76.0 (7851)	-1.4%*	66.9 (6580)	73.6 (7612)	+6.7%*	18.0 (1772)	24.0 (2481)	+6.0%*	21.9 (2151)	22.8 (2361)	+0.9%
	Tertiary	74.3 (1077)	73.0 (1287)	-1.3%*	77.0 (1117)	76.7 (1353)	-0.3%*	19.4 (282)	22.9 (404)	+3.5%*	19.6 (284)	19.9 (351)	+0.3%
Country of origin	Austria	79.3 (10 326)	74.4 (1250)	-2.4%*	72.7 (623)	73.1 (1228)	+0.4%*	18.6 (161)	26.3 (441)	+7.7%*	23.1 (198)	22.9 (384)	-0.2%
	EU (excl. Austria)	76.1 (1212)	75.9 (774)	-0.2%	59.3 (945)	65.5 (669)	+6.2%*	17.3 (276)	20.4 (208)	+3.1%*	23.9 (380)	22.5 (230)	-0.6%
	Others	74.7 (2348)	74.1 (2432)	-0.6%*	72.0 (2261)	76.0 (2496)	+4.0%*	20.2 (636)	26.6 (874)	+6.4%*	20.5 (643)	23.0 (755)	+2.5%*
Vienna	Yes	79.8 (9847)	76.8 (9590)	-3.0%*	66.2 (8164)	73.9 (9232)	+7.7%*	18.2 (2244)	24.5 (3060)	+6.3%*	23.4 (2884)	23.4 (2925)	+0.0%
	No												

Comparison 2006/2007 and 2014.

*, ** means different at a significance level $P < 0.05$.

Table 3 Percentage of participants with a consultation at a specialist/outpatient department/hospital within the past 12 months before the survey and no concomitant GP visit

Group	Subgroup	Specialist consultations without GP consultations % (n)			Outpatient department without GP consultations % (n)			Hospital stay without GP consultations % (n)		
		2006/2007	2014	Difference	2006/2007	2014	Difference	2006/2007	2014	Difference
All		15.1 (1571)	18.8 (2200)	+3.7%*	8.5 (245)	14.9 (587)	+6.4%*	8.1 (286)	12.2 (448)	+4.1%*
Sex	Female	15.0 (959)	18.6 (1281)	+3.6%*	7.6 (115)	14.8 (302)	+7.2%*	7.7 (150)	10.8 (205)	+3.1%*
	Male	15.2 (612)	18.9 (919)	+3.7%*	9.5 (130)	15.1 (285)	+5.6%*	8.6 (136)	13.6 (243)	+5.0%*
Age group	15-34	20.6 (594)	19.3 (620)	-1.3%*	12.2 (109)	18.5 (212)	+6.3%*	13.5 (115)	15.6 (151)	+2.1%
	35-54	19.0 (700)	20.6 (792)	+1.6%*	9.4 (92)	14.9 (170)	+5.5%*	10.8 (120)	10.4 (107)	-0.4%
	55-74	8.4 (237)	18.0 (602)	+9.6%*	5.1 (37)	11.6 (135)	+6.5%*	4.2 (43)	11.8 (135)	+7.6%*
Highest level of education	75 and older	3.8 (40)	14.2 (186)	+10.4%*	2.4 (7)	14.6 (70)	+12.2%*	1.5 (8)	10.3 (55)	+8.8%*
	Primary	10.4 (285)	16.6 (458)	+6.2%*	6.3 (52)	17.3 (182)	+11.0%*	5.2 (57)	12.5 (122)	+7.3%*
	Secondary	15.8 (1041)	18.9 (1439)	+3.1%*	8.2 (146)	14.7 (364)	+6.5%*	8.5 (183)	12.0 (283)	+3.5%*
	Tertiary	21.9 (245)	22.4 (303)	+0.5%*	16.7 (47)	10.1 (41)	-6.6%*	16.2 (46)	12.3 (43)	-3.9%
Country of origin	Austria	14.8 (1315)	18.5 (1819)	+3.7%*	8.6 (209)	14.3 (468)	+5.7%*	8.1 (240)	12.4 (379)	+4.3%*
	EU	17.2 (107)	18.9 (232)	+1.7%*	7.4 (12)	15.6 (69)	+8.2%*	4.5 (9)	12.5 (49)	+8.0%*
	Others	15.7 (149)	22.3 (149)	+6.6%*	8.7 (24)	24.0 (50)	+15.3%*	9.7 (37)	8.7 (20)	-1.0%
Vienna	Yes	18.6 (422)	21.8 (544)	+3.2%*	8.2 (52)	17.3 (151)	+9.1%*	9.3 (60)	13.1 (99)	+3.8%*
	No	14.1 (1149)	17.9 (1656)	+3.8%*	8.6 (193)	14.2 (436)	+5.6%*	7.8 (226)	11.9 (349)	+4.1%*

Comparison 2006/2007 and 2014.

*, ** means different at a significance level $P < 0.05$.

or even higher in Austria in 2014 compared to 2006/2007. Particularly, the already high utilization of secondary care services in 2006/2007, such as those specialist and hospital outpatient department use, have increased substantially between the years assessed (table 1). When evaluating demographic subgroups, it becomes obvious that those groups with the least frequent use of secondary care services in 2006/2007 had the highest increase in the utilization in 2014 (table 2). This suggests that high use of secondary care services is increasingly independent of demographic factors. In addition, the secondary care service utilization without concomitant GP visit increased as well in 2014. Nearly every fifth person who consulted a specialist, every sixth person presenting to a hospital outpatient department and every eighth person hospitalized (table 3), did not consult a GP within the same period. Moreover, this utilization behaviour increased primarily in the demographic groups with the lowest utilization in 2006/2007, such as the elderly, persons with primary educational level and persons born in non-European countries. However, it still remained highest in younger persons, persons with tertiary educational levels and persons living in Vienna (table 3).

The question is what happened between 2006/2007 and 2014 in Austria that could explain this increase. The demographic composition as well as disease burden of the population more or less stayed the same between these years.¹⁹ Additionally, the health care system remained relatively unchanged between these years, including the universal and direct access to nearly all physician-led services at all levels of care. The only substantial change was a minor recommendation issued for GPs as first point of care.¹⁹ However, increasing financial pressure as well as outpatient departments that suffer overwhelming patient numbers, in light of the publication of Kringos *et al.*,²⁴ led to stakeholders discussing the relevance of strengthening the primary care sector around the year 2010. From 2015 onwards, some changes with regard to the postgraduate education pathway to become a GP, as well as the organization of primary care services, were implemented. However, there is still no clear demarcation line between the primary and secondary level of care, as well as no list- or gatekeeping system in place. Indeed, when comparing the results of this study with health care utilization data from countries with gatekeeping, it becomes obvious that countries such as Sweden and Norway have an up to 3-fold lower utilization of secondary care services.^{25,26} In contrast, similar countries as Austria without gatekeeping, such as Germany, have similar utilization behaviours.²⁷

It could be speculated that in countries without gatekeeping, persons with primary care sensitive conditions more often seek care in secondary care services. This can result from demand-induced supply by secondary health care providers who offer primary care services, such as preventive check-ups or screenings, as well as the finding that laypersons cannot estimate their need of care properly and the viewpoint that more specialized care is better care.^{18,20,28}

It is disturbing that both the youngest and the oldest age groups tend to consult specialists more frequently in 2014 than in 2006/2007. Additional studies would be warranted as to whether those seeking such care really demonstrate different or advanced disease burden or health conditions, such as, mental health conditions.

The strength of this study is the large sample size of both ATHIS years, the similarity of the sample with the Austrian population, as well as the weighting of the data. Another strength is the comprehensive questionnaire with parallel questions for both study years, which increased the consistency of the data. One limitation is that the results are based on self-reported data and, therefore, a recall bias cannot be excluded.²⁹ Though in this case, bias should be minimal for the difference of reported service utilization, as both surveys should have the same directionality and magnitude of bias for the observed point estimates. However, the methodology was not exactly the same in the two periods. Other important limitations are the period of 12 months, and the fact that the data only reported whether or not a person had at least one consultation with a GP,

specialist, outpatient department or hospital within the prior 12 months. We had no information on the number of consultations at each access point or the directionality of the visits. Therefore, it was not possible to analyse which consultation came first and the appropriateness of care used. A methodological drawback of the analysis is the fact that this study is a cross-sectional series and, therefore, of limited explanatory power.

The results of this study demonstrate a concerning trend in the increased utilization of secondary health services, especially specialists with their own offices, and hospital outpatient departments from 2006/2007 to 2014. Whereas it appears that GP consultation is declining in Austria. Clear pathways and appropriate access to health care services is essential, and this must be driven by systemic changes more than passive recommendations. By now, the Austrian primary care sector is far away from the central role in the overall coordination and continuity of the healthcare system despite universal coverage and access.

Supplementary data

Supplementary data are available at *EURPUB* online.

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The recent study was a secondary data analysis of the two ATHIS databases, for which the authors received no funding. The two ATHIS themselves were commissioned by the Austrian Ministry of Health and conducted by Statistics Austria. For that reason, Statistic Austria received funding from the Austrian Ministry of Health.

Conflicts of interest: None declared.

Key points

- The results of this study demonstrate a trend in increased utilization of secondary care, including specialists and hospital outpatient services from 2006/2007 to 2014 in a country with already high secondary care service utilization and no clear delineation between access to primary and secondary care.
- In spite of increased international recognition on the importance of strengthening primary care, and resulting improvement in health outcomes, quality and cost, it appears that GP consultation is declining in Austria.
- It is particularly declining in groups with most needs of primary care services like old persons and children.
- Clear pathways and appropriate access to health care services is essential, and this must be driven by systemic changes more than passive recommendations.

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