Immigration and the utilisation of preventive care in Europe: Results from SHARE Job Episodes Panel

EXTENDED ABSTRACT

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1 Introduction

Migration to and within Europe has increased dramatically during the past thirty years, and it is doubtful that the trend will diminish or reverse soon (Fiore et al., 2019). How to guarantee equal access to healthcare to migrants without jeopardizing the financial sustainability of public health care systems is an open research and policy issue (WHO et al., 2010). Although there is a growing number of studies on the effect of immigration on primary healthcare services (Norredam et al., 2009; Graetz et al., 2017), there is little evidence on preventive care experience of immigrant populations relative to natives in Europe. Preventive care can save healthcare costs and maintain long-term health amongst individuals. Previous studies found that preventive care, including dental check-ups (Oscarson et al., 2007), can be a useful tool in reducing health complications. Despite the evidence that immigrants spend less on healthcare services than natives (Goldman et al., 2006), there has been a lack of research on understanding immigrants' use of preventive care.

Understanding immigrants' utilisation of preventive care can have important implications for health systems and the economy of the destination country. If immigrants forgo preventive care and get care only for acute illnesses, they may be more severely ill when they receive care in the short run and may face deterioration to overall health in the long run, and both outcomes could be very costly (Pylypchuk and Hudson, 2009). Admittedly, politicians in several countries have expressed concerns that immigrants place a burden on the healthcare system (Pylypchuk and Hudson, 2009). The decline of immigrants' health toward the health status of natives in their destination country is a phenomenon known as assimilation. Evidence of assimilation effect are found among immigrants in Canada (McDonald and Kennedy, 2004), Australia (Biddle et al., 2007), and the US (Pylypchuk and Hudson, 2009). However, little has been done to examine immigrants' convergence to natives' behaviour in the use of preventive care in Europe.

In this paper, we use retrospective data from the Survey on Health, Ageing and Retirement in Europe (SHARE) to analyse immigrants' use of preventive care relative to that of natives. The data we use are organized in a long panel format (Brugiavini et al., 2019) and allow to study whether there is any assimilation effect in migrants preventive care use. We control for a rich set of demand factors and socio-demographic characteristics that may affect the use of preventive healthcare services. Our measures of preventive care are a check for blood pressure, a dental check, a gynaecological check, a mammogram test, a blood test, and a vision test.

2 Data

The third and seventh waves of the SHARE survey, that took place respectively in 2008/9 and in 2017 collected retrospective interviews on a large sample of Europeans. The 2008/9 wave of SHARE provided life-history information about a representative sample of about 27,000 respondents aged 50 or over from 14 countries. The domains of interest include family relationships, fertility history, housing, working history, health and health care. In wave 7, all respondents involved in SHARE that did not take part to wave 3 were administered the life history interview. Wave 7 took place in 2017 in 28 countries, reaching full coverage of the EU. Moreover, many countries included in wave 3 substantially enlarged their samples in waves 4 to 6. The result is that about 62,561 respondents took part in the retrospective interview of wave 7. The original dataset contains sequences of life events in

a flat file format: as an example, the information about country of residence is looped over all the residences respondents had in their life and the information is stored as a set of variables for each individual in the sample. We use the data reorganized in a retrospective panel dataset (the so called "job episodes panel") described in Brugiavini et al. (2019): each respondent contributes as many observations as there are years of age from birth to the age at which they are observed at the moment of the interview. Information is then re-organized in a longitudinal file format. Following the country of residence example, for each year of respondents' life we know the country they were living in at *that* time. The Job Episodes Panel includes basic demographics and work related characteristics. We merged information regarding onset of chronic diseases from the regular waves of SHARE, and information regarding health care use from the two retrospective waves.

The SHARE survey allows to reconstruct the health care history of the respondents, providing information on a number of important medical tests/visits: dentist, blood pressure, blood tests, gynecological visits, mammograms and vision tests. While for the first two of the above, SHARE collects the relevant information both in wave 3 and in wave 7, for the other check-ups the information is only present in wave 3. This is why we end up with a different number of observations in the estimations we are going to present hereafter. For all the medical checks indicated above, the survey provides two types of information. On the one hand, we know when healthcare check-ups started and whether the respondents have received them regularly, for every 10-15 years age band of their past life. On the other hand, for each period when regular visits occured, the respondents report the frequency of the visits/tests: "at least once a year", "not every year but at least every two years" or "less often". Organizing these informaion along the line of the Job Episodes Panel we observe for each year of life of every respondent the participation to preventive healthcare checks.

3 Estimation

Let H_{ict} be the dependent variable measuring preventive healthcare access (i.e. dentist, blood pressure, gynaecological checkups, mammogram, blood test, and vision test), a variable indicating whether individual i in country c in year t had regular access to preventive health care H. The dependent variable takes four values, i.e., H_{it}=1 if individual i had access to preventive care 'at least once a year', 0.5 if 'not every year, but at least every two years', 0.25 if 'less often', and 0 if no access to a particular type of preventive care.

We estimate the following fixed effect model:

$$H_{ict} = \alpha_0 + \alpha_1 age_{it} + \alpha_2 age_{it}^2 + X_i\delta + \beta_0 MS_{ict} + \beta_1 YSM_{ict} + \beta_2 YSM_{ict}^2 + \gamma_i + \varepsilon_{it} \quad (1)$$

where MS_{ict} is a dummy that captures the migration status of individual i in country c at time t. The (possibly nonlinear) effect of assimilation on utilisation of preventive health care is captured by a quadratic in YSM_{ict}, a variable that counts the years since migration in country c at time t if respondent i is not a native of country c. Standard errors are clustered at household level, while X includes a comprehensive list of socio demographic and health characteristics.

4 Preliminary Results

Table 1 highlights that we have a relevant number of person-year observations that refer to migrants, and the average characteristics over the immigrant sample of key covariates are statistically different from those of the natives.

Table 2 reports the results of our baseline specification. We find that immigrants have a statistically higher propensity to use dental care, and a lower propensity to access all other preventive cares. Among those there are significant differences. Moreover, we do find evindence of an assimilation process: the longer the time immigrants spend in a host country, the higher the propensity to access preventive care. The marginal rate of convergence is decreasing, moreover those preventive care measures with a stronger negative effect of the migrant status dummy, are those that exhibit a larger assimilation coefficient: in other words, the convergence is faster for those preventive care measures for which there is a bigger gap between natives and migrants at the beginning.

Summing up, our results show that being an immigrant is negatively associated with participation to preventive healthcare checks. The recent literature has proved that preventive healthcare leads to very important savings in health costs together with improvals in the individuals health status. Consequently, policy measures meant to increase participation in preventive healthcare programs may help sustainability of public healthcare systems.

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Tables anf figures

Table 1: Descriptive statistics

Control variables	(1) (Natives)	(2) (Immigrants)	(3) (P-value of the difference)
Age (years)	35.1	34.3	0.0000
Female (dummy)	0.72	0.28	0.000
Married (dummy)	0.71	0.284	0.000
Employee or self-employed (dummy)	0.717	0.283	0.000
Observations	4,373,968	1,742,339	

Table 2: LPM Results

	(1) Dentist	(2) Blood pressure	(3) Gynaecology	(4) Mammograms	(5) Blood test	(6) Vision test
Immigrant (dummy)	0.00597***	-0.0307***	-0.0880***	-0.0453***	-0.0480***	-0.0672***
	(0.00213)	(0.00283)	(0.00740)	(0.00616)	(0.00627)	(0.00549)
YSM	0.00207***	0.00140***	0.00905***	0.00487***	0.00290***	0.00387***
	(0.000250)	(0.000338)	(0.00125)	(0.000896)	(0.000940)	(0.000844)
YSM squared	-0.0000262***	-0.0000321***	-0.000103***	-0.0000492***	-0.0000229	-0.0000359**
	(0.00000397)	(0.00000610)	(0.0000219)	(0.0000170)	(0.0000181)	(0.0000162)
Age	0.00242***	-0.000193*	0.0106***	0.00474***	0.0000497	0.00356***
	(0.0000706)	(0.000104)	(0.000217)	(0.000170)	(0.000180)	(0.000158)
Age squared	-0.00000706***	0.000128***	-0.0000772***	0.0000126***	0.000123***	0.0000422***
	(0.000000800)	(0.00000136)	(0.00000235)	(0.00000213)	(0.00000237)	(0.00000204)
No. of children	-0.00180***	-0.0103***	0.00509***	-0.00798***	-0.0135***	-0.0102***
	(0.000531)	(0.000655)	(0.00162)	(0.00100)	(0.00104)	(0.000905)
Employee or self	0.00260***	-0.0239***	0.0454***	-0.00978***	-0.0281***	-0.00248*
	(0.000709)	(0.00110)	(0.00244)	(0.00163)	(0.00181)	(0.00149)
Married	0.0245***	0.00498***	0.123***	-0.0310***	0.00254	-0.00640***
	(0.00106)	(0.00137)	(0.00372)	(0.00235)	(0.00230)	(0.00198)
Back pain	-0.0000828	0.0573***	0.00903	0.0207	-0.00592	0.00533
	(0.00539)	(0.00910)	(0.0157)	(0.0134)	(0.0145)	(0.0119)
Arthritis	-0.00169	0.0739***	-0.00691	-0.0114	0.0746***	-0.0121
	(0.00637)	(0.0109)	(0.0146)	(0.0123)	(0.0156)	(0.0119)
Osteoporosis	0.00841	-0.00751	0.0125	-0.0294*	0.0627***	0.0143
	(0.00936)	(0.0168)	(0.0208)	(0.0175)	(0.0233)	(0.0198)
Heart attack	-0.0266***	0.268***	-0.0102	-0.0416**	0.237***	0.0146
	(0.00723)	(0.0130)	(0.0236)	(0.0191)	(0.0209)	(0.0174)
Diabetes	-0.0118*	0.229***	-0.0195	-0.0174	0.361***	0.185***
	(0.00655)	(0.0120)	(0.0193)	(0.0167)	(0.0156)	(0.0172)
Stroke	-0.00291	0.204***	-0.0132	-0.00526	0.128***	-0.0398*
	(0.00979)	(0.0177)	(0.0382)	(0.0371)	(0.0299)	(0.0226)
Asthma	-0.0129	0.0433**	-0.0396	-0.0597***	0.0450	-0.00323
	(0.0113)	(0.0199)	(0.0298)	(0.0194)	(0.0292)	(0.0234)
Cancer	-0.00309	0.110***	0.165***	0.233***	0.151***	0.0356**
	(0.00689)	(0.0129)	(0.0212)	(0.0228)	(0.0216)	(0.0162)
Tuberculosis	0.000789	-0.0184	-0.0535	-0.0454	-0.0762	-0.0496
	(0.0223)	(0.0389)	(0.0764)	(0.0439)	(0.0715)	(0.0361)
Psychiatric problems	-0.00473	0.0685***	0.0472**	0.0472**	0.0729***	-0.0173
	(0.00826)	(0.0141)	(0.0220)	(0.0194)	(0.0208)	(0.0162)
Headaches	-0.00824	0.0346*	0.0496*	-0.0245	-0.0143	0.0335
	(0.0107)	(0.0190)	(0.0274)	(0.0198)	(0.0287)	(0.0218)
Fatigue	0.00910	0.0652***	0.0169	0.0274	0.0344	0.0346
	(0.0103)	(0.0188)	(0.0278)	(0.0267)	(0.0299)	(0.0263)
Infectious disease	0.0184	0.00844	0.00306	0.0311	0.0243	0.00892
	(0.0183)	(0.0300)	(0.0474)	(0.0380)	(0.0464)	(0.0317)
_cons	0.411***	-0.00574***	-0.0446***	-0.0336***	0.00483	0.0193***
	(0.00120)	(0.00142)	(0.00544)	(0.00405)	(0.00416)	(0.00371)
N	5783621	5655314	1005710	1003854	1820703	1814485

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$