

Chapter 1

Results 3: Social care, multimorbidity, and unscheduled health care use

This chapter reports results of an analysis conducted to answer research question 2 (link to section). As described in section ??, receipt of unscheduled care was measured in three ways: presence of any unscheduled care episode in the unscheduled care data mart (including acute hospital admission, A & E, NHS24, GP OOH, or SAS), and specifically by any admission to hospital or attendance at A & E as outcomes in their own right.

The chapter is split into three sections. The first reports descriptive statistics of receipt of unscheduled care for the whole cohort using financial year 2013/14 as a reference year. Plots showing the relationship between the receipt of unscheduled care and age, sex, deprivation status, and multimorbidity status are provided.

The remaining sections report results of logistic regression models applied to each year of data for each of the three outcome measures. Contingency tables of each outcome measure by sociodemographic characteristics, model diagnostics in the form of goodness-of-fit tables, and plots depicting Average Partial Effects (APEs) for included independent variables are provided in each of these sections.

1.1 Overall Descriptive statistics

Figure 1.1 shows that as age increases, there are higher percentages of individuals receiving any form of USC in 2013/14. This pattern is consistent across all years of data. Unlike the corresponding plot for social care (figure ??), there are no major differences in the percentages of males and females using USC. Approximately one in five of those aged 65 used USC in 2013/14, compared to approximately one in three of those aged 80, and over half of those aged 93 and above.

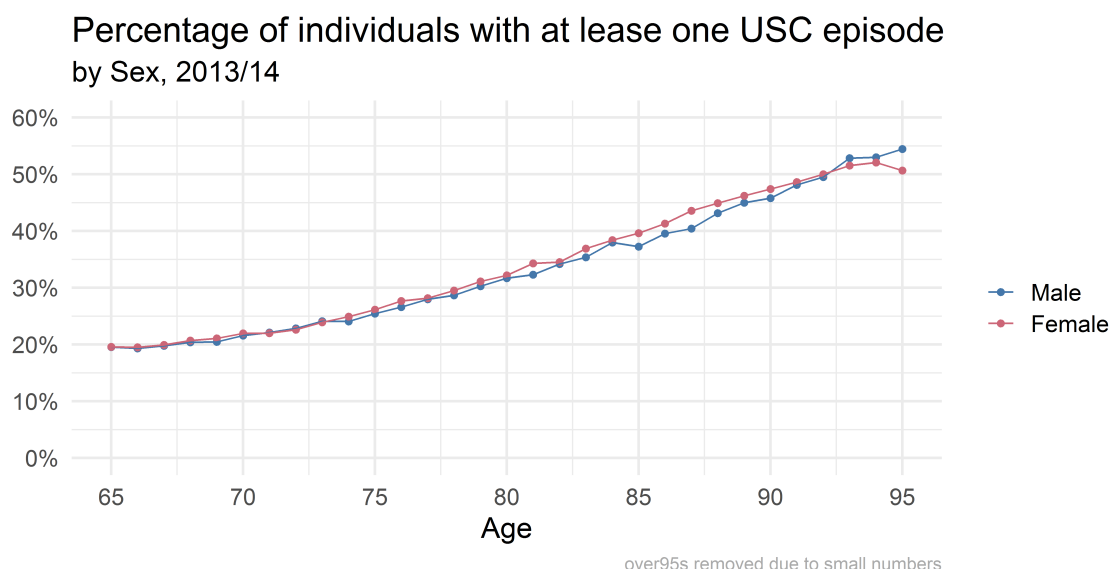


Figure 1.1: Percentage of individuals using USC by sex at specific ages. 2013/14

Figure 1.2 also shows an increase in the percentage of individuals using USC as age increases. As in the previous figure an average of approximately 20% at age 65 and close to 50% of those aged 93 and over used USC. However, this figure demonstrates a gradient in the percentages of individuals using USC at all ages moving from SIMD decile 1 (most deprived) to decile 10 (most affluent). At age 65 approximately 23% of those in decile 1 used USC compared to approximately 18% in decile 10. At age 80 the figures are almost 40% and 28% respectively.

The third figure charting the increase in the percentage of individuals using USC as age increases in 2013/14 is presented in figure 1.3. This figure shows a noticeably different pattern to those seen in figures 1.1 and 1.2. Individuals prescribed nine or more repeat medicines have a much higher than average percentage use of USC at all ages (40% at age 65 and over 60% above the age on 90). Those receiving 6-8 repeat medicines also have slightly higher than average use of USC whilst those in the other two groups have below average use at all ages.

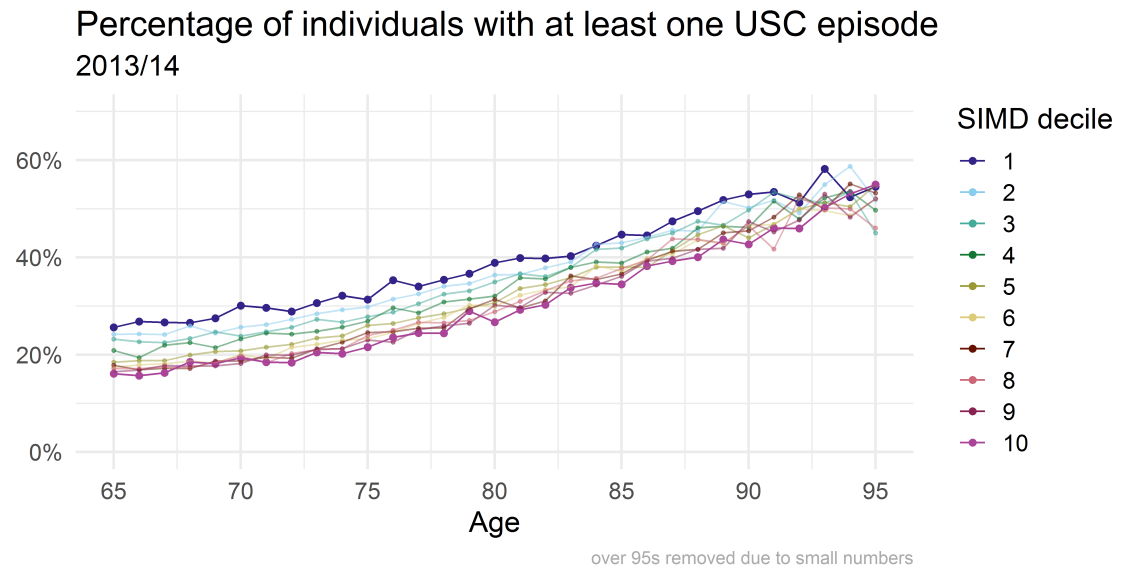


Figure 1.2: Percentage of individuals using USC by deprivation at specific ages. 2013/14

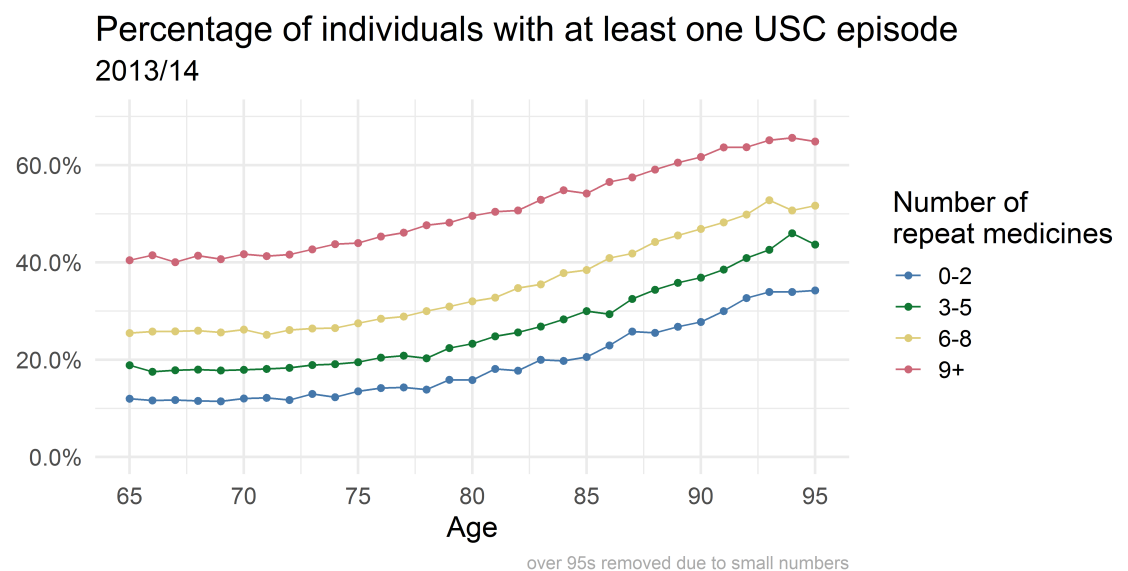


Figure 1.3: Percentage of individuals using USC by repeat medicines group at specific ages. 2013/14

1.2 Any form of unscheduled care

This section reports results of logistic regression models detailed in section ???. The outcome variable in these models is receipt of any form of unscheduled care (A & E attendance, acute admission to hospital, NHS24, GP OOH, or SAS) in the six months after the end of each financial year.

As seen in the previous chapter, a model is reported for each year of data from 2011/12 to 2015/16. The section is split into three subsections: a contingency table of descriptive statistics for the outcome variable is provided, followed by a table reporting goodness-of-fit measures for each model, before a final subsection with tables and plots detailing the APEs of each variable on the outcome. Where trends of results across years are similar, financial year 2013/14 is used as a reference in tables and plots.

1.2.1 Descriptive statistics

Table 1.1 shows a breakdown of the cohort in financial year 2013/14. There were a total of 868,947 individuals included in the model for this financial year. A higher percentage of females (20.4%) compared to males (18.5%) accessed some form of USC. As many as 85.2% of individuals who died in the six months after the end of year 2013/14 also used USC in that period. Use of USC increased with age, 13.2% of those aged 65-69 compared to 44% of those age above 95. The median value for SIMD of 5 (IQR 5) for those that used USC was lower than for those that did not (median 6, IQR 5). Those in the lowest multimorbidity group, 0-2 repeat medicines, had a lower percentage (9.9%) of individuals using USC compared to those in the highest group (34.5%). Individuals using social care, USC in the year prior to the outcome period, or living in a care home all had higher percentages of USC use compared to those not using these services (42.5% v 16.7%, 36.4% v 13.3%, and 46.3% v 18.6% respectively).

Variable	Value	No USC	USC	Total	p
Sex	Male	314876 (81.5)	71657 (18.5)	386533	<0.001
	Female	384090 (79.6)	98324 (20.4)	482414	
Mortality	Alive	696150 (81.9)	153813 (18.1)	849963	<0.001
	Died	2816 (14.8)	16168 (85.2)	18984	
Age group	65-69	235255 (86.8)	35667 (13.2)	270922	<0.001
	70-74	173603 (84.2)	32628 (15.8)	206231	
	75-79	134403 (79.8)	33972 (20.2)	168375	
	80-84	89077 (74.2)	30998 (25.8)	120075	
	85-89	45708 (67.0)	22505 (33.0)	68213	
	90-94	17322 (60.3)	11386 (39.7)	28708	
	95 plus	3598 (56.0)	2825 (44.0)	6423	
SIMD	Median (IQR)	6 (5)	5 (5)		<0.001
Repeat Medicine Group	0-2	209453 (90.1)	22913 (9.9)	232366	<0.001
	3-5	208839 (84.6)	37977 (15.4)	246816	
	6-8	157037 (78.1)	44068 (21.9)	201105	
	9+	123637 (65.5)	65023 (34.5)	188660	
Any form of social care	No Social Care	643430 (83.3)	128911 (16.7)	772341	<0.001
	Social Care	55536 (57.5)	41070 (42.5)	96606	
Any USC episode in previous year	No USC	548628 (86.7)	84022 (13.3)	632650	<0.001
	USC	150338 (63.6)	85959 (36.4)	236297	
Resident in care home	No Care Home	673354 (81.4)	154242 (18.6)	827596	<0.001
	Care Home	16826 (53.7)	14533 (46.3)	31359	

Total N used in model = 868,947

All values n(%) unless otherwise stated

Row-wise percentages within grouped variables

Table 1.1: Characteristics of those with/without any USC use in the six months following end of 2013/14

1.2.2 Goodness of fit

Financial Year	McFadden's pseudo R^2	Deviance	Log Likelihood	Deviance (null model)	Log Likelihood (null model)
2011/12	0.128	693271.367	-346635.683	794787.923	-397393.962
2012/13	0.128	704196.663	-352098.332	807111.451	-403555.725
2013/14	0.138	733843.874	-366921.937	851217.72	-425608.86
2014/15	0.14	735740.669	-367870.334	855953.525	-427976.762
2015/16	0.139	742481.81	-371240.905	861898.907	-430949.453

Table 1.2: Goodness of fit for model applied to each year of data

Table 1.2 shows the results of diagnostic tests for the each model. An improvement is seen in values of McFadden's R^2 over time although values are lower than seen with social care models (range 0.128 - 0.140).

1.2.3 Average Partial Effects

Figure 1.4 plots the APEs of each model and table 1.3 shows the values of these effects for financial year 2013/14. Dying during the outcome period of interest has the largest positive effect on use of USC. The APE for dying in 2013/14 indicates an increase in the probability of using USC of almost 60% compared to those still alive. Of the

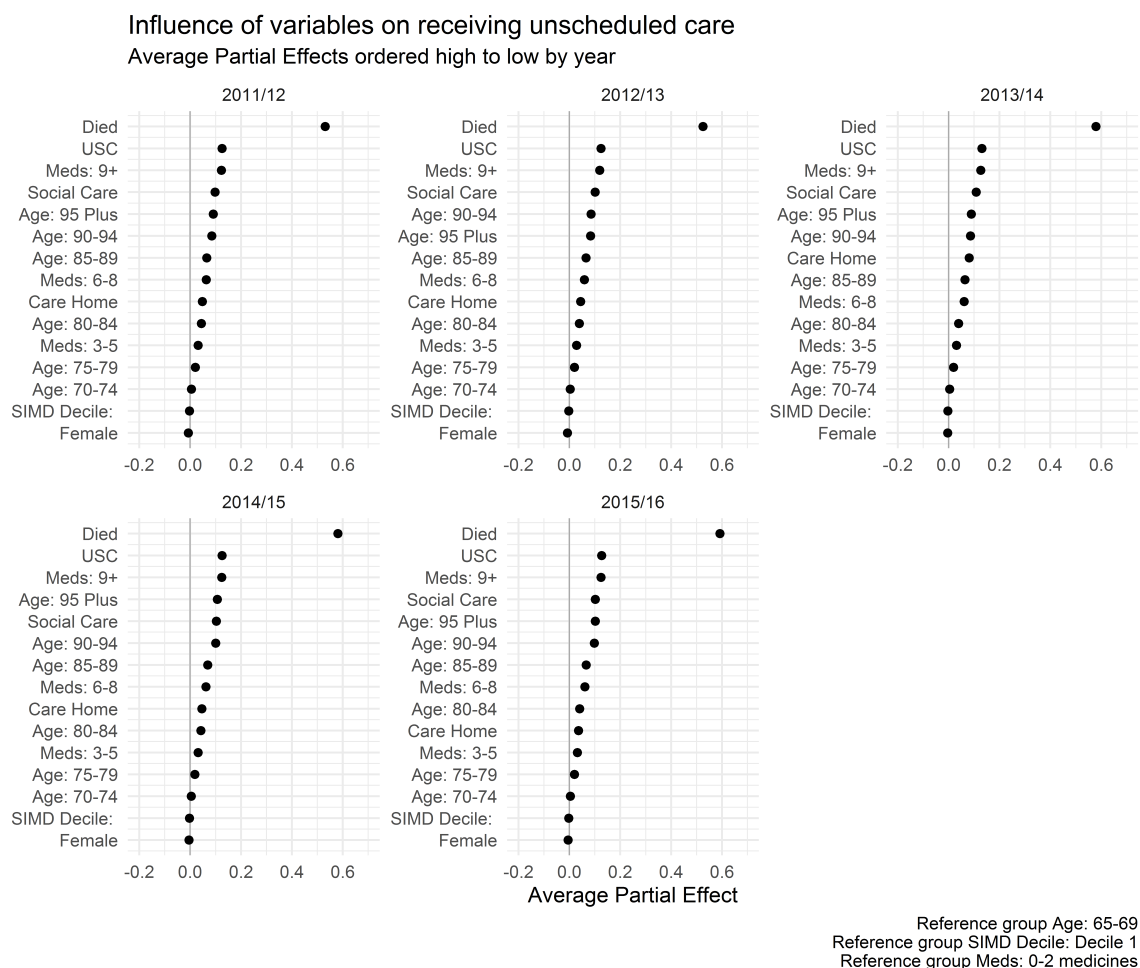


Figure 1.4: Average Partial Effect plot

remaining variables in the model, previous use of USC, higher multimorbidity, receipt of social care, and increasing age are associated with higher use of USC.

The difference in probability of using USC for those that had used USC in the year prior to the outcome period was 13.1% in 2013/14, whilst the difference for those who appeared in the 2013/14 SCS was 10.8%. Those with highest levels of multimorbidity (9 or more repeat medicines) had a 12.6% increase in probability of using USC compared to those in the lowest multimorbidity group (0-2 medicines). The APE increased through multimorbidity groups - a 3.1 % increase in probability of USC use for those with 3-5 repeat medicines and a 6.1% increase for those with 6-8 repeat medicines compared to the lowest group were found in 2013/14. A similar trend was seen through age groups where the APE increased from 0.4% (age group 70-74) to 8.9% (age group 95 plus) compared to the reference age group (65-69). Living in a care home also had a positive effect on USC use although this was of a lower magnitude than seen with previous USC use or social care receipt (8.1%). After adjustment for other variables in the model, females were found to have less probability of using USC than males although the magnitude of the effect size was negligible (0.4% decrease in probability in 2013/14).

SIMD was the only independent variable modelled as a continuous variable. Table 1.3

Variable	Average Partial Effect	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Died	0.579	0.57	0.589
USC	0.131	0.129	0.134
Meds: 9+	0.126	0.123	0.128
Social Care	0.108	0.105	0.112
Age: 95 Plus	0.089	0.075	0.103
Age: 90-94	0.086	0.08	0.092
Care Home	0.081	0.077	0.086
Age: 85-89	0.064	0.06	0.068
Meds: 6-8	0.061	0.059	0.064
Age: 80-84	0.039	0.036	0.041
Meds: 3-5	0.031	0.028	0.033
Age: 75-79	0.019	0.016	0.021
Age: 70-74	0.004	0.002	0.006
SIMD Decile:	-0.003	-0.003	-0.002
Female	-0.004	-0.006	-0.002

Reference group for age: 65-69

Reference group for meds: 0-2 repeat medicines

Table 1.3: Average Partial Effects 2013/14

shows an APE of -0.003 (-0.3%) for 2013/14. As this is an instantaneous effect the conditional effect of SIMD in 2013/14 is plotted in figure 1.5 to aid interpretation.

The plot shows that after adjusting for other variables in the model, the conditional effect of SIMD varies by only 1.6% across deciles (0.103 (95% CI 0.101-0.107) in decile 1 to 0.087 (95% CI 0.084-0.089) in decile 10). The APE of -0.003 found in table ref indicates the coefficient of the slope of this plot at the average value of SIMD (5.6 SD 2.8).

Figures 1.6 and 1.7 show an alternative view of APEs over time. These are split into two charts to make visualisation easier. In figure 1.6 effect sizes for previous USC use, social care receipt and multimorbidity groups remain stable across time in different models. The APE for death during the outcome period increases slightly from 2013/14 onwards.

Figure 1.7 again shows stable APEs for sex, SIMD and lower age groups and slight increases for age groups 85-89 and above. A fluctuation in the APE for care home to 0.08 is recorded in 2013/14 compared to the year before and after where values are approximately 0.05.



Figure 1.5: Conditional effect of SIMD on receipt of USC

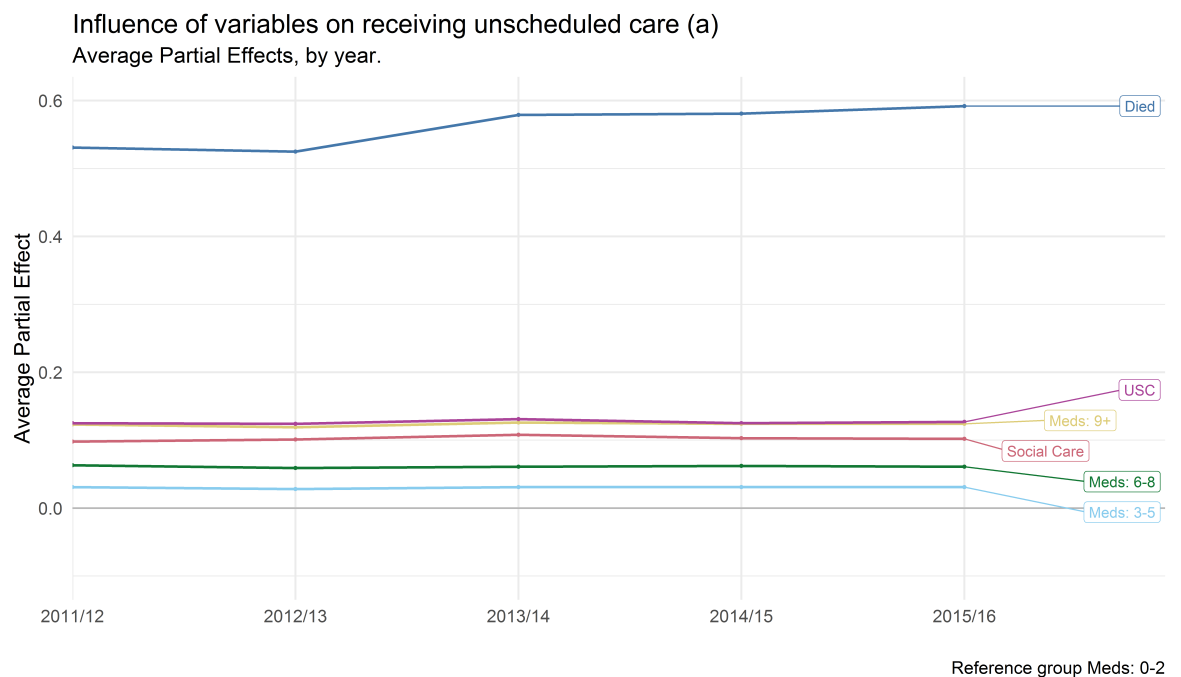


Figure 1.6: APE of variables on receipt of any USC over time (a)

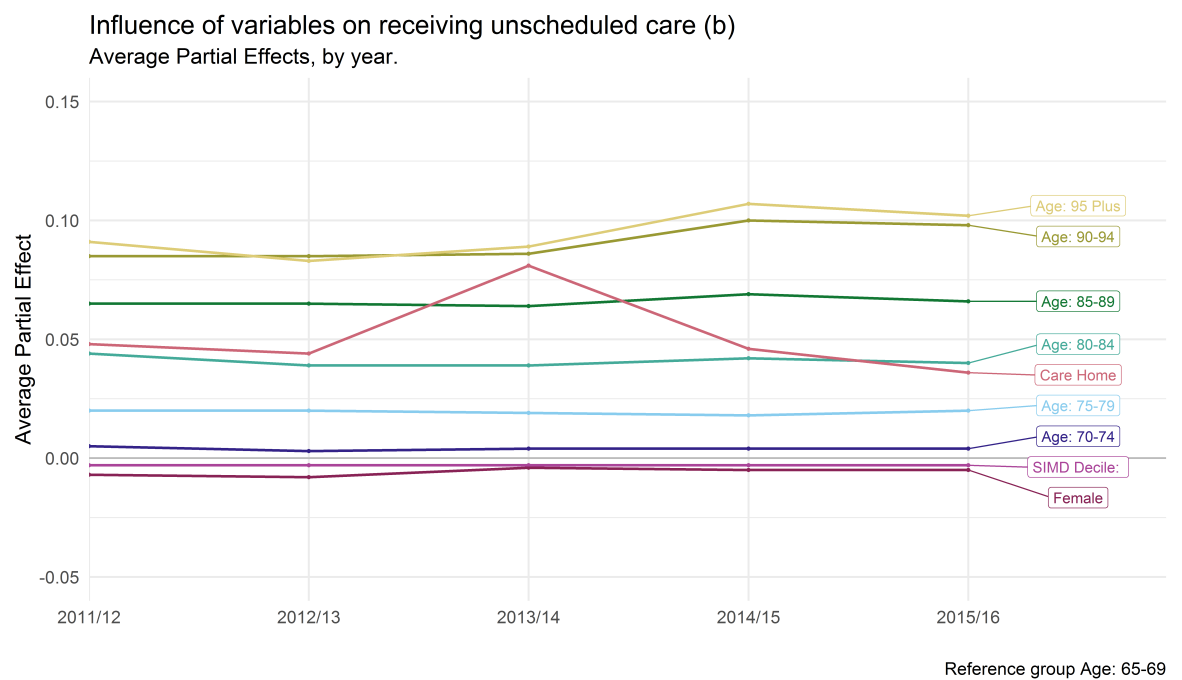


Figure 1.7: APE of variables on receipt of any USC over time (b)

1.3 Acute admission to hospital

This section reports results of logistic regression models detailed in section ???. The outcome variable in these models is acute admission to hospital in the six months after the end of each financial year.

The section follows the same format as presented in the previous section with the outcome variable being the only difference in analyses.

1.3.1 Descriptive statistics

Variable	Value	No Unscheduled Acute Admission	At least one unscheduled acute admission	Total	p
Sex	Male	351063 (90.8)	35470 (9.2)	386533	0.173
	Female	438554 (90.9)	43860 (9.1)	482414	
Mortality	Alive	781081 (91.9)	68882 (8.1)	849963	<0.001
	Died	8536 (45.0)	10448 (55.0)	18984	
Age group	65-69	256976 (94.9)	13946 (5.1)	270922	<0.001
	70-74	191795 (93.0)	14436 (7.0)	206231	
	75-79	151900 (90.2)	16475 (9.8)	168375	
	80-84	104231 (86.8)	15844 (13.2)	120075	
	85-89	56587 (83.0)	11626 (17.0)	68213	
	90-94	22971 (80.0)	5737 (20.0)	28708	
	95 plus	5157 (80.3)	1266 (19.7)	6423	
SIMD	Median (IQR)	6 (5)	5 (4)		<0.001
Repeat Medicine Group	0-2	223999 (96.4)	8367 (3.6)	232366	<0.001
	3-5	230936 (93.6)	15880 (6.4)	246816	
	6-8	180667 (89.8)	20438 (10.2)	201105	
	9+	154015 (81.6)	34645 (18.4)	188660	
Any form of social care	No Social Care	716249 (92.7)	56092 (7.3)	772341	<0.001
	Social Care	73368 (75.9)	23238 (24.1)	96606	
Any USC episode in previous year	No USC	597421 (94.4)	35229 (5.6)	632650	<0.001
	USC	192196 (81.3)	44101 (18.7)	236297	
Resident in care home	Not Care Home	754195 (91.1)	73401 (8.9)	827596	<0.001
	Care Home	25993 (82.9)	5366 (17.1)	31359	

Total N used in model = 868,947

All values n(%) unless otherwise stated

Row-wise percentages within grouped variables

Table 1.4: Characteristics of those with/without any acute unscheduled hospital admission in the six months following end of 2013/14

Table 1.4 shows a cross table of the cohort in 2013/14 with regard to the outcome variable. As seen in the previous section, there were a total of 868,947 individuals included in the model for this financial year. There was little difference between the percentage of males (9.2%) and females (9.1%) that were admitted to hospital during the outcome period and the difference between these groups was not statistically significant. A majority (55%) of those that died during the outcome period were admitted to hospital. An increase in the percentage of individuals being admitted to hospital is seen through age groups from 5.1% of those aged 65-69 to 20% of those aged 90-94 with a slight reduction in those aged over 95 (19.7%). Increases are also seen through multimorbidity groups from 3.6% for those prescribed 0-2 repeat medicines to 18.4% for those prescribed nine or more repeat medicines. Higher percentages of the population

using social care (24.1%), unscheduled care in the year prior to the outcome period (18.7%), and those resident in care home (17.1%) had an admission in the outcome period compared to those not using these services (7.3%, 5.6%, and 8.9% respectively). The median value of SIMD (5, IQR 4) was lower than that for those with no admission (6, IQR 5).

1.3.2 Goodness of fit

Financial Year	McFadden's pseudo R^2	Deviance	Log Likelihood	Deviance (null model)	Log Likelihood (null model)
2011/12	0.147	430546.273	-215273.136	504861.738	-252430.869
2012/13	0.144	438334.205	-219167.103	512022.779	-256011.39
2013/14	0.144	450790.356	-225395.178	526463.251	-263231.625
2014/15	0.143	454587.839	-227293.92	530154.674	-265077.337
2015/16	0.142	459709.093	-229854.546	535881.304	-267940.652

Table 1.5: Goodness of fit fro model applied to each year of data

Table 1.5 shows the results of diagnostic tests for each model. The value of McFadden's R^2 decreases slightly over time from 0.147 to 0.142. Although values are lower than seen for social care models fitted in the previous chapter, they are slightly higher than found for models using any USC use reported in the previous section.

1.3.3 Average Partial Effects

Figure 1.8 plots the APEs of each variable in each model and table 1.6 shows the values of APEs for financial year 2013/14. As reported in models where any USC use is the outcome variable in the previous section, dying during the outcome period has the largest APE. This magnitude of this effect is, however, lower than seen in the previous section (34.6% increase in probability of admission compared to almost 60% increase in any USC use). High multimorbidity (nine or more repeat prescriptions) has the next highest positive APE, In 2013/14 this group had a 7.7% increase in probability in being admitted to hospital compared to those from the lowest group (0-2 repeat medicines). Those with 6-8 and 3-5 repeat medicines had increases in probability of admission of 3.5% and 1.6% respectively. Use of any form of unscheduled care in the year prior to the outcome period or receipt of social care during the SCS census week was associated with increases in the probability of admission to hospital in 2013/14 of 6.7% compared to those with no prior USC use and 6.0% for those with no social care receipt respectively. There was an incremental increase in APE through age groups from those aged 70-74 (0.7%) to those aged 90-94 (6.0%) compared to those age 65-69. Those aged 95 or above had a lower APE (5.4%) than their immediately younger age group.

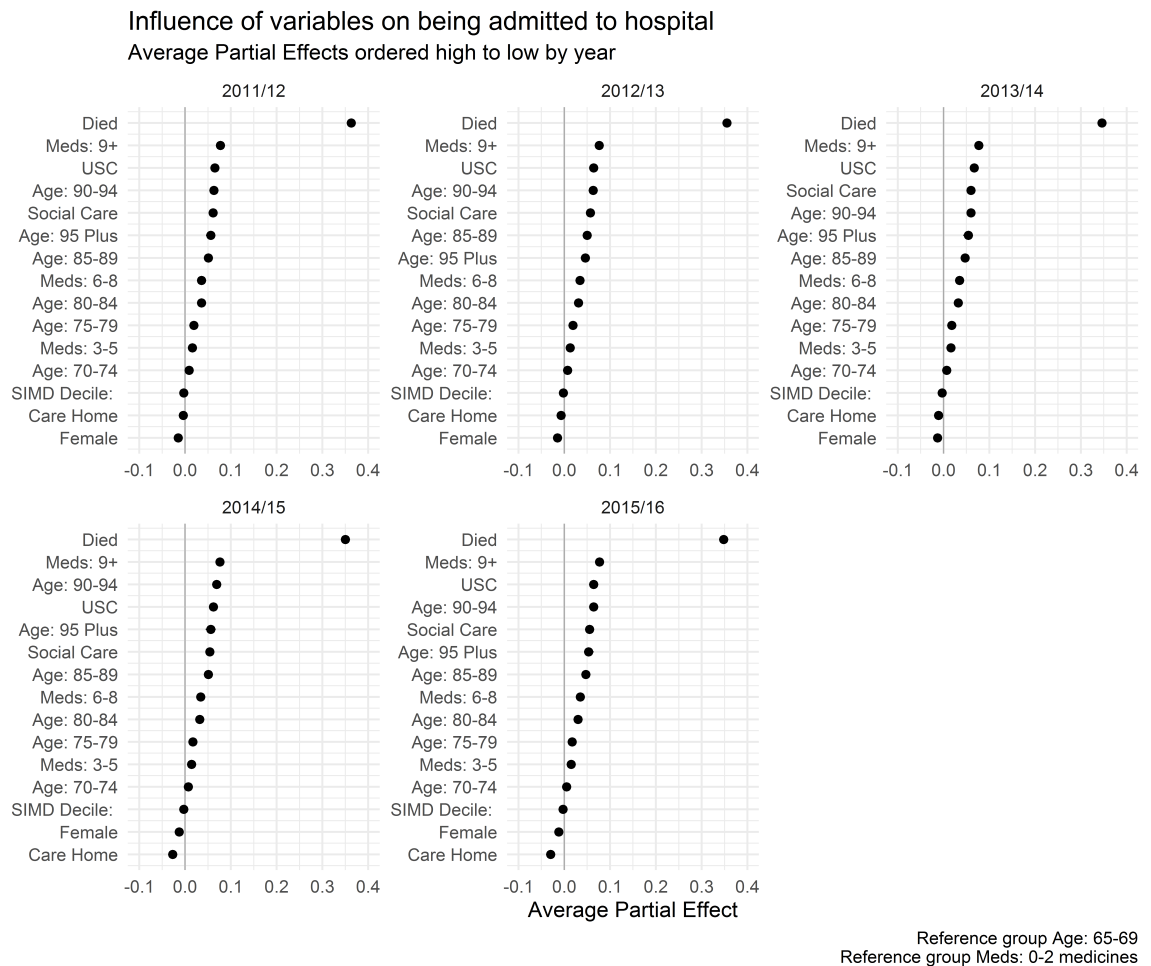


Figure 1.8: Average Partial Effect plot

There is a negative effect on admission to hospital for females compared to males with a difference in probability of 1.3%. This effect size is larger than seen in models where any form of USC was the outcome variable (section 1.2.3). Living in a care home also had a negative effect on admission to hospital after controlling for other variables in the model. The APE in 2013/14 was -0.011 indicating a 1.1% decrease in the probability of admission to hospital for those living in a care home. This value increases over time and the most recent model shows a 3% decrease in probability of admission.

Figure 1.9 shows the conditional effect of SIMD on admission to hospital during the six months following financial year 2013/14. As SIMD was modelled as a continuous variable the APE of -0.003 represents the coefficient of the slope in figure ref at the average value of SIMD (5.6, SD 2.8). After adjusting for other variables the conditional effect of SIMD varies by only 1% across deciles (0.034 (95% CI 0.032-0.036) in decile 1 to 0.024(95% CI 0.023-0.025) in decile 10).

Figures 1.10 and 1.11 are alternative plots of APE showing how effects vary across models through time. Two chart are provided to enable easier visualisation. Figure 1.10 shows effect sized of previous USC use, social care receipt, and multimorbidity groups are relatively stable across models. APEs for the flag indicating if an individual died during the outcome period reduce very slightly (by approximately 0.01 or 1%

Variable	Average Partial Effect	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Died	0.346	0.337	0.355
Meds: 9+	0.077	0.075	0.079
USC	0.067	0.065	0.068
Age: 90-94	0.06	0.055	0.065
Social Care	0.06	0.058	0.062
Age: 95 Plus	0.054	0.043	0.064
Age: 85-89	0.047	0.044	0.05
Meds: 6-8	0.035	0.033	0.037
Age: 80-84	0.032	0.03	0.034
Age: 75-79	0.018	0.016	0.02
Meds: 3-5	0.016	0.015	0.018
Age: 70-74	0.007	0.005	0.009
SIMD Decile:	-0.003	-0.003	-0.002
Care Home	-0.011	-0.013	-0.009
Female	-0.013	-0.014	-0.012

Reference group for age: 65-69

Reference group for meds: 0-2 repeat medicines

Table 1.6: Average Partial Effects 2013/14

probability) from 2011/12 to 2013/14 and remain stable thereafter.

Figure 1.11 shows the APE for Care home decreasing across models of more recent periods from a negligible APE in 2011/12 to -0.03 (or 3% reduction in probability) in 2015/16. There are small fluctuations in APE for the oldest two age groups. Otherwise, younger age groups, SIMD, and sex show stable APEs across models.

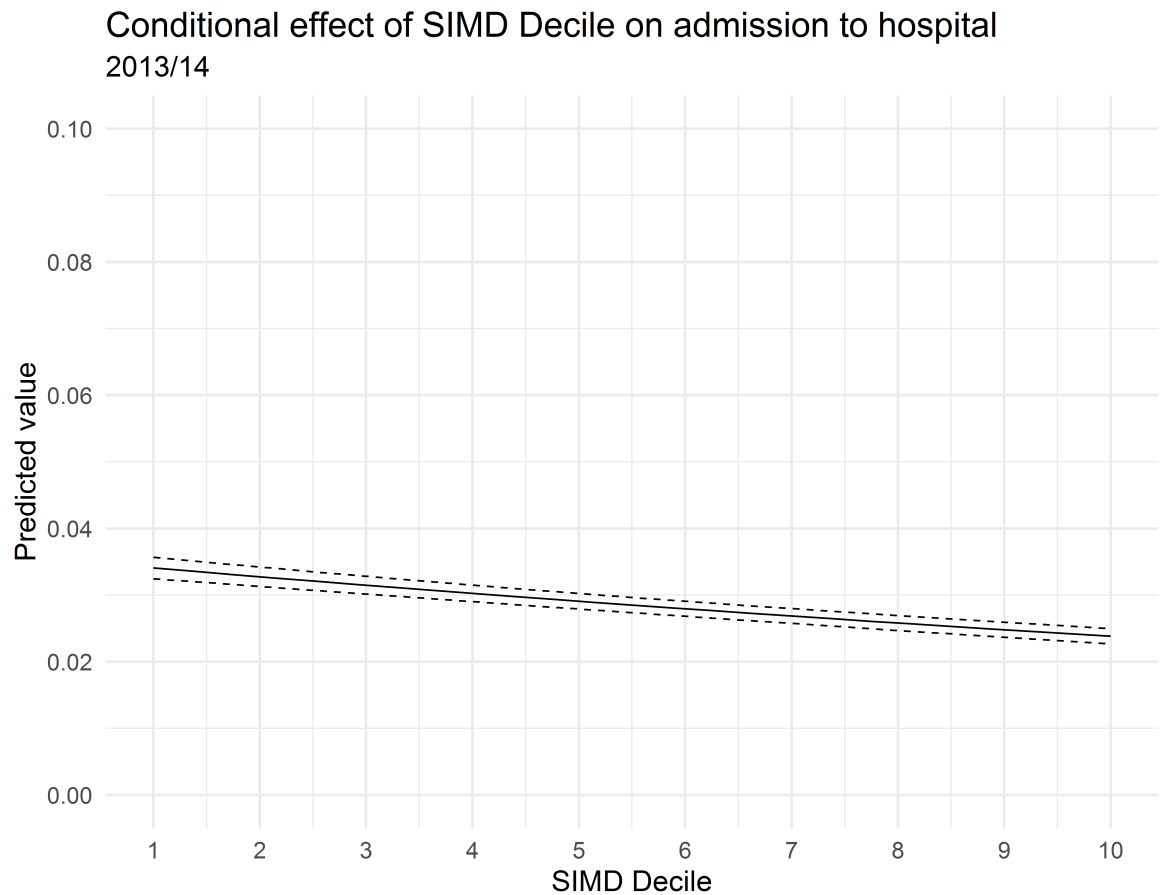


Figure 1.9: Conditional effect of SIMD on any unscheduled hospital admission

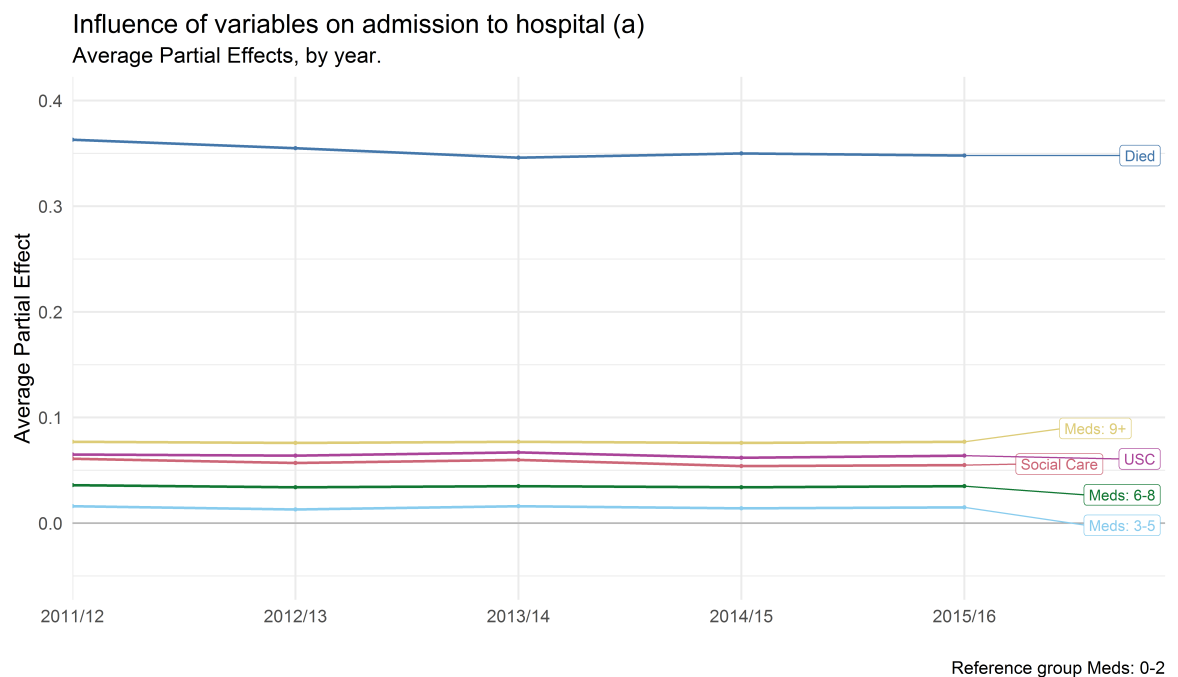


Figure 1.10: APE of variables on any hospital admission over time (a)

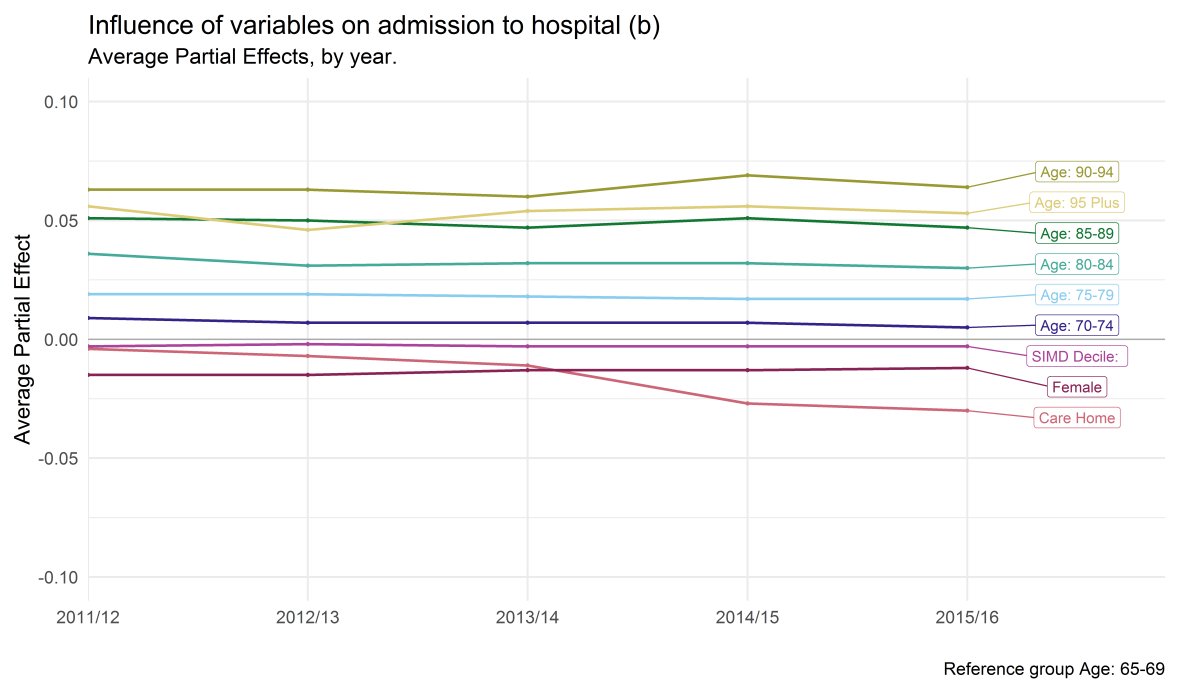


Figure 1.11: APE of variables on any hospital admission over time (b)

1.4 Attendance at A & E

This section reports the results of logistic regression models outlined in section ???. The section follows the same format as the previous two sections. The only difference in the analysis is that the outcome variable indicated any attendance at an Accident & Emergency department in the six months following the end of each financial year.

1.4.1 Descriptive statistics

Variable		Value	No A & E attendance	At least one A & E attendance	Total	p
Sex	Male	341078 (88.2)		45455 (11.8)	386533	<0.001
	Female	423448 (87.8)		58966 (12.2)	482414	
Mortality	Alive	754397 (88.8)		95566 (11.2)	849963	<0.001
	Died	10129 (53.4)		8855 (46.6)	18984	
Age group	65-69	248280 (91.6)		22642 (8.4)	270922	<0.001
	70-74	185485 (89.9)		20746 (10.1)	206231	
	75-79	147061 (87.3)		21314 (12.7)	168375	
	80-84	101027 (84.1)		19048 (15.9)	120075	
	85-89	55116 (80.8)		13097 (19.2)	68213	
	90-94	22518 (78.4)		6190 (21.6)	28708	
	95 plus	5039 (78.5)		1384 (21.5)	6423	
SIMD decile	Median (IQR)	6 (5)		5 (4)		<0.001
Repeat Medicine Group	0-2	217959 (93.8)		14407 (6.2)	232366	<0.001
	3-5	223580 (90.6)		23236 (9.4)	246816	
	6-8	174382 (86.7)		26723 (13.3)	201105	
	9+	148605 (78.8)		40055 (21.2)	188660	
Any form of social care	No Social Care	692451 (89.7)		79890 (10.3)	772341	<0.001
	Social Care	72075 (74.6)		24531 (25.4)	96606	
Any USC episode in previous year	No USC	580821 (91.8)		51829 (8.2)	632650	<0.001
	USC	183705 (77.7)		52592 (22.3)	236297	
Resident in care home	Not Care Home	730451 (88.3)		97145 (11.7)	827596	<0.001
	Care Home	24838 (79.2)		6521 (20.8)	31359	

Total N used in model = 868,947

All values n(%) unless otherwise stated

Row-wise percentages within grouped variables

Table 1.7: Characteristics of those with/without any A & E attendance in the six months following end of 2013/14

Table 1.7 is a cross table showing attendance at A & E broken down by sociodemographic factors. A total of 868,947 individuals were included in the model for this financial year. A slightly higher percentage of females (12.2%) attended A & E compared to males (11.8%). Of individuals who died during the outcome period, 46.6% attended A & E over the same time frame. The percentage of those attending A & E increase with age from 8.4% of those aged 65-69 to 21.6% of those aged 90-94 (and 21.5% aged 95 and over). The median value of SIMD was lower (5, IQR 4) for those that attended A & E than for those that did not (median 6, IQR 5). In multimorbidity groups, the percentage of those attending A & E increased as the number of regular prescribed medicines increased incrementally from 6.2% for those receiving 0-2 medicines to 21.2% of those prescribed nine or more repeat medicines. Twenty-five per cent of those receiving social care compared to 10.3% of those that did not attended

A & E during the outcome period following the end of 2013/14. Similarly, 22.3% of those that had used any form of USC in the year prior to the outcome period attended an Emergency Department compared 8.2% of those that did not. Finally, 20.8% of those living in a care home compared with 11.7% of those that did not had at least one attendance at A & E during the outcome period following 2013/14.

1.4.2 Goodness of fit

Financial Year	McFadden's pseudo R^2	Deviance	Log Likelihood	Deviance (null model)	Log Likelihood (null model)
2011/12	0.087	547700.3	-273850.2	600039.1	-300019.6
2012/13	0.087	560286.3	-280143.1	613680	-306840
2013/14	0.087	577390.7	-288695.3	632696.9	-316348.5
2014/15	0.084	574248.8	-287124.4	626795.9	-313397.9
2015/16	0.081	585741.7	-292870.8	637674.1	-318837

Table 1.8: Goodness of fit for models applied to each year of data

Table 1.8 shows low McFadden's R^2 values for all models ranging from 0.081 in the most recent year to 0.087 in 2011/12.

1.4.3 Average Partial Effects

Figure 1.12 shows the APEs for each variable in each model across years whilst table 1.9 shows the exact values for 2013/14 model. As seen in previous models relating to USC, dying during the outcome period had the largest partial effect on attendance at A & E. The increase in probability for attendance for those that died was 24.3% compared to those that were alive at the end of the outcome period. Prior use of USC in the 12 months before the outcome period showed a 8.5% increase in probability compared to those that had not used USC. There was an increase in probability of attending an emergency department for all multimorbidity groups compared to the reference group, 0-2 repeat medicines. These saw an increase in probability of 1.9%, 3.9%, and 8% for the 3-5, 6-8, and 9 plus repeat medicine groups respectively in 2013/14. An incremental increase in APEs for age groups is also seen ranging from 0.5% for the 70-74 group to 4.9% for 90-94 group compared to the 65-69 reference group. Social care had a positive effect on A & E attendance, those present in the 2013/14 SCS had an increased probability of 5.3% compared to those not in the SCS.

There is a negative effect for females compared to males in all models. However, in these models the effect is negligible (0.7% decrease in probability of attending A & E after 2013/14). Living in a care home also had a negative effect on admission to A & E after adjustment. In the 2013/14 model this effect is negligible (-0.002 or a decrease in probability of 0.2%) but the effect is larger in later models (-0.027 or a 2.7% decrease in probability).

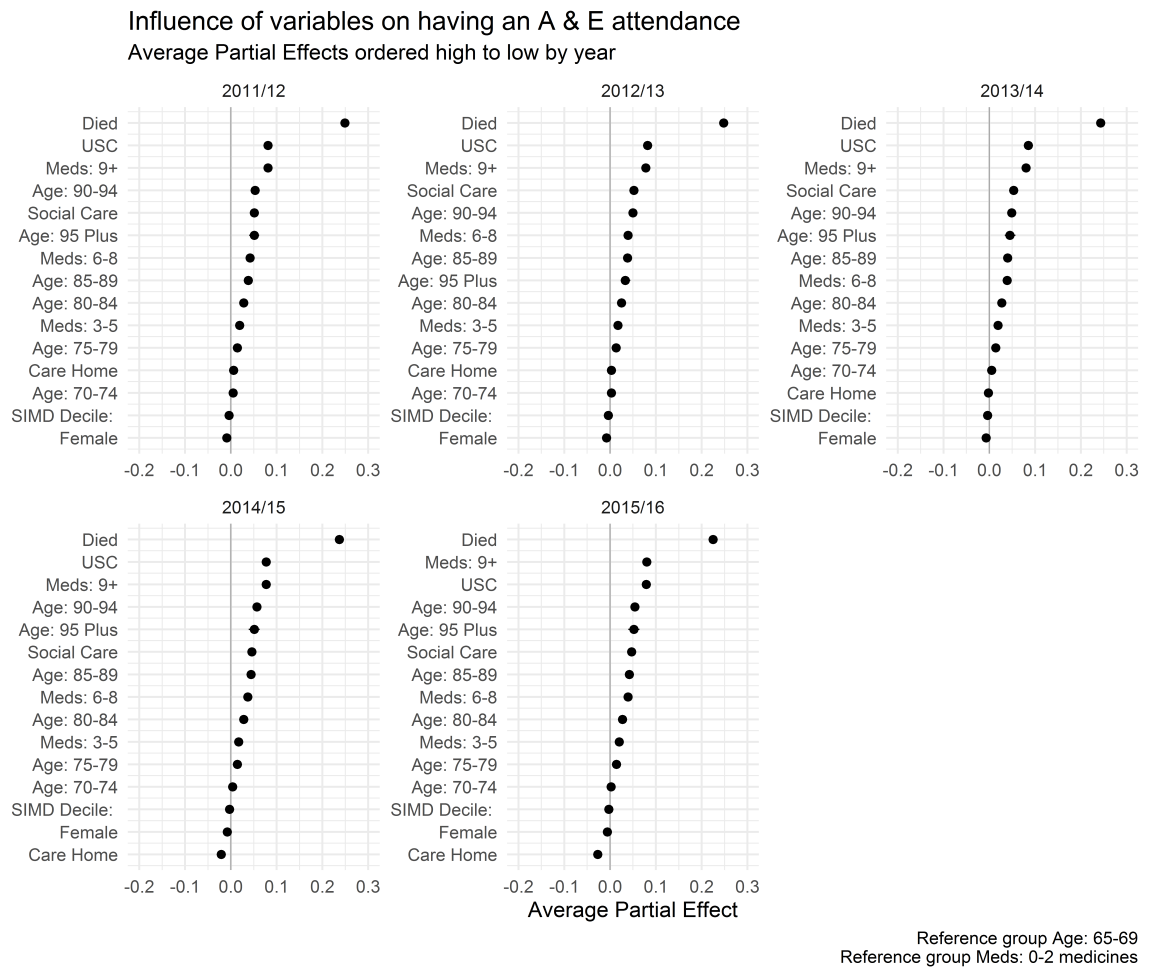


Figure 1.12: Average Partial Effect plot

Figure 1.13 shows the conditional effect of SIMD of attendance at an emergency department in the six months following the end of financial year 2013/14. The APE of -0.004 reflects the coefficient of the slope in figure ref at the mean value of SIMD (5.6, SD 2.8). The conditional effect of SIMD varies by 1.8% across deciles (0.069 (95% CI 0.067-0.071) in decile 1 to 0.051 (95% CI 0.049-0.053) in decile 10).

Figures 1.14 and 1.15 show APEs for variables charted across models through time. Figure 1.14 shows stable APEs across models for prior use of USC, social care, and multimorbidity groups. There is a very small reduction in the magnitude of APE for death during the outcome period in later models.

Figure 1.15 shows reduction an increase in the negative value of APE for those living in a care home compared to those that do not in later models. Older age groups show slight fluctuation in APE values over time whilst other age groups, SIMD decile and sex APEs appear steady across models.

Variable	Average Partial Effect	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Died	0.243	0.234	0.251
USC	0.085	0.083	0.086
Meds: 9+	0.08	0.078	0.082
Social Care	0.053	0.05	0.055
Age: 90-94	0.049	0.043	0.054
Age: 95 Plus	0.045	0.034	0.057
Age: 85-89	0.04	0.036	0.043
Meds: 6-8	0.039	0.037	0.041
Age: 80-84	0.027	0.025	0.029
Meds: 3-5	0.019	0.017	0.021
Age: 75-79	0.014	0.012	0.016
Age: 70-74	0.005	0.002	0.007
Care Home	-0.002	-0.005	0.001
SIMD Decile:	-0.004	-0.004	-0.003
Female	-0.007	-0.008	-0.006

Reference group for age: 65-69

Reference group for meds: 0-2 repeat medicines

Table 1.9: Average Partial Effects 2013/14

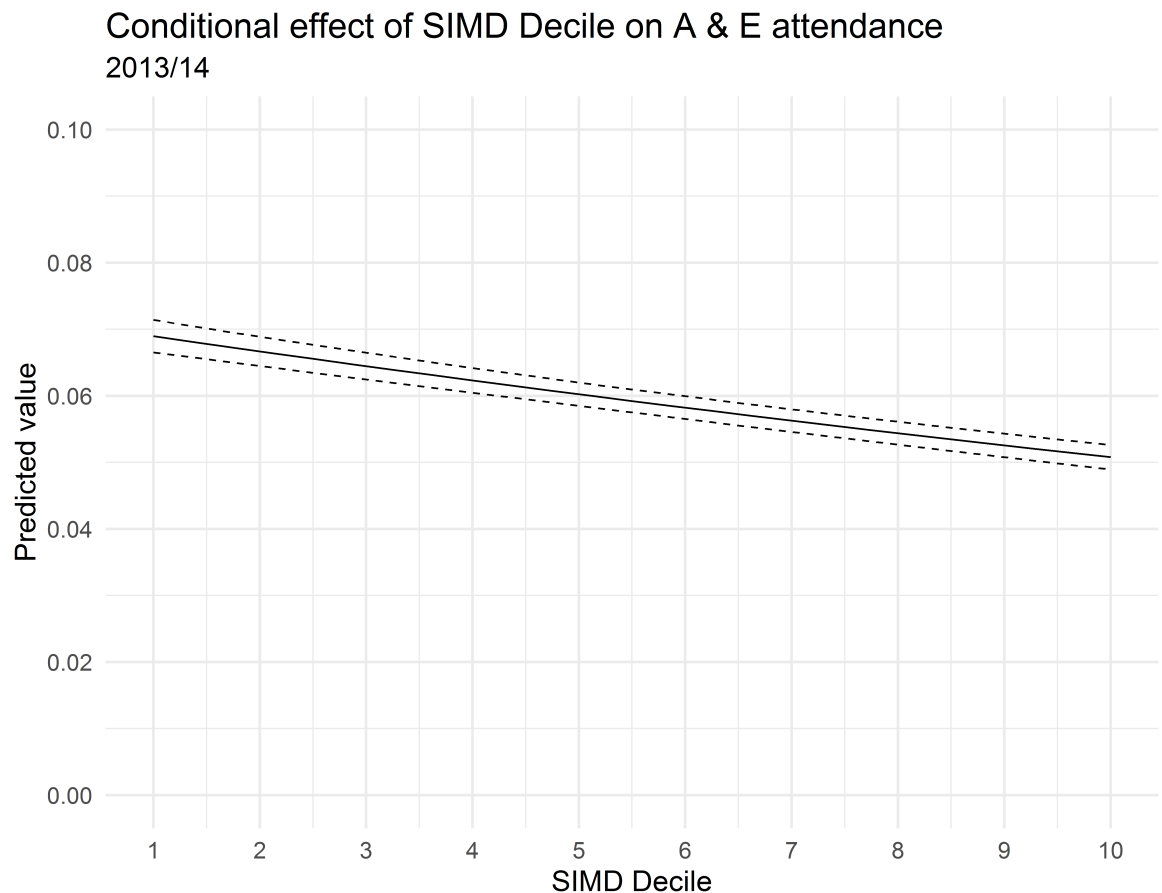


Figure 1.13: Conditional effect of SIMD on any A & E attendance

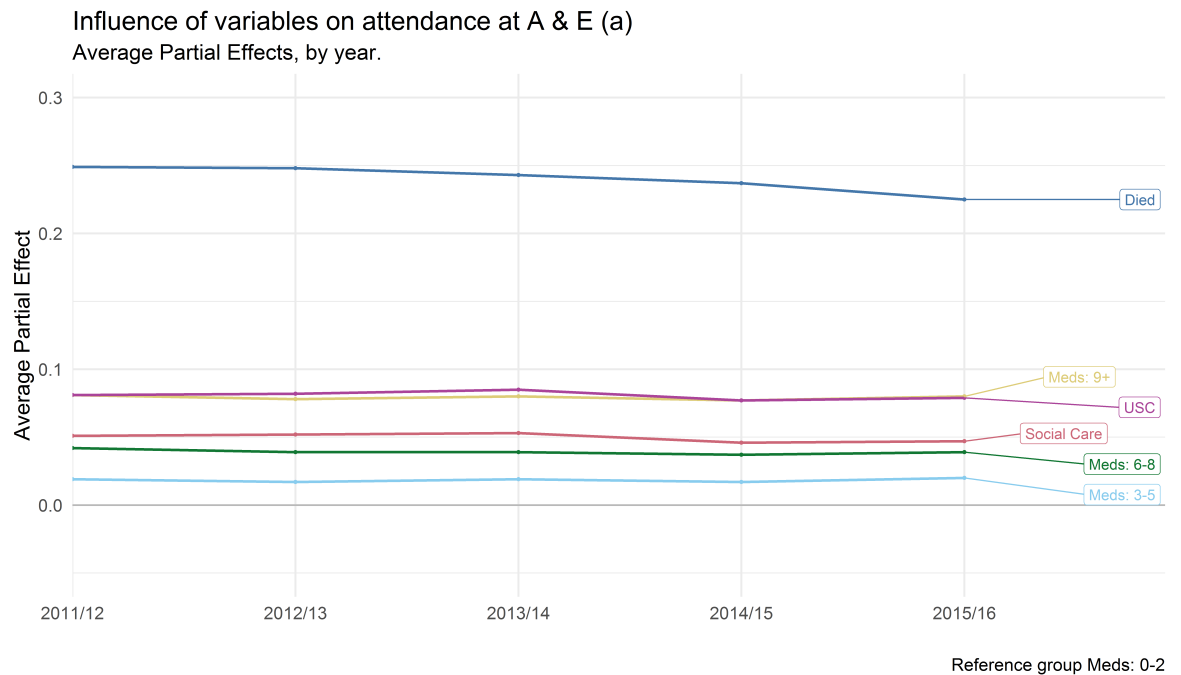


Figure 1.14: APE of variables on any A & E attendance over time (a)

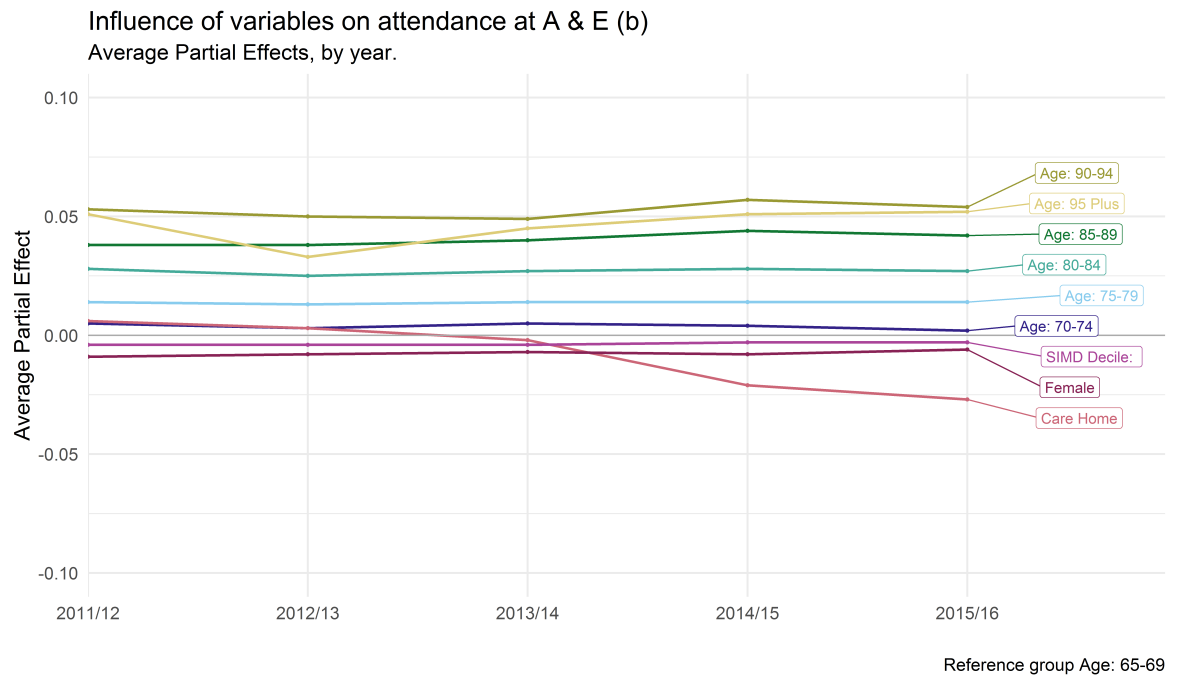


Figure 1.15: APE of variables on any A & E attendance over time (b)