Supplementary Tables

Scholes S, Biddulph J, Davis AC and Mindell JS. Socioeconomic differences in hearing among middle-aged and older adults: cross-sectional analyses using the Health Survey for England. *Submitted to BMJ Open.*

Supplementary Table 1 Characteristics of participants aged 45+ with main interview with and without nurse visit

	No nurse visit	Nurse visit	*P*-value
N	**1,330**	**3,429**	
Age in years: mean (SD)	62.4 (12.4)	63.0 (11.7)	0.129
Age (%):			
45-54	34.7	29.8	*<0.001*
55-64	24.7	25.7	
65-74	20.8	26.6	
75+	19.8	18.0	
Sex (%):			
Males	46.2	45.1	0.502
Females	53.8	54.9	
Region (%):			
North	37.3	31.7	*<0.001*
Midlands	27.0	30.6	
London	11.0	8.0	
South	24.7	29.8	
Occupational noise exposure (%):			
None	71.4	69.1	*0.004*
Less than 5 years	7.6	10.9	
5 years or more	20.3	19.8	
Missing	0.7	0.2	
Income tertiles (%):			
Highest	24.6	29.2	*0.002*
Middle	22.6	30.9	
Lowest	22.6	22.2	
Missing	30.2	17.8	
Index of Multiple Deprivation (%):			
Least deprived	19.9	24.5	*<0.001*
2nd	22.0	22.5	
3rd	18.4	21.3	
4th	19.3	17.6	
Most deprived	20.3	14.1	
Education (%):			
Degree	17.0	19.7	*<0.001*
Below degree	45.5	50.7	
No qualifications	36.0	29.5	
Missing	1.5	0.1	
Smoking status (%):			
Never	51.8	54.1	*0.011*
Former	30.2	32.3	
Current	16.8	13.6	
Missing	1.1	0.0	
BMI (%):			
Normal	18.3	24.9	*0.291*
Overweight	31.1	37.2	
Obese	23.8	28.2	

Missing	26.8	9.8	
Doctor-diagnosed diabetes (%):			
No	89.5	89.6	*0.886*
Yes	10.5	10.4	
Missing	0.0	0.0	
Hearing difficulty (%):			
None	68.2	60.0	<0.001
Slight	15.4	22.7	
Moderate	7.5	8.7	
Great	8.2	8.0	
Missing	0.7	0.5	
Hearing aid use (%):			
Current	10.1	9.5	0.748
Used but not nowadays	3.1	3.3	
Never used	86.3	87.1	
Missing	0.5	0.1	

Abbreviations: BMI: body mass index; SD: standard deviation

Notes: Analysis is unweighted. Data are presented as mean and standard deviation (SD) for continuous variables; and as the column (%) for categorical variables. *P*-values are based on the t-test for continuous variables and the chi-square test χ^2 for categorical variables (excluding missing data on covariates) for the comparison of differences in the covariates between the two groups of participants (with and without nurse-visit data). No adjustment for multiple comparisons was performed.

Supplementary Table 2 Age-standardised prevalence (%) and standard error (SE) of hearing loss, persons aged 45 years and over, HSE 2014

Characteristics	Males					Females				
	n	Hearing loss % (SE)*	Moderate % (SE)†	Moderate to severe % (SE)‡	*P-value*§	n	Hearing loss % (SE)*	Moderate % (SE)†	Moderate to severe % (SE)‡	*P-value*§
Region:										
North	485	26.7 (2.1)	14.9 (1.7)	11.8 (1.6)	0.618	556	20.2 (1.6)	13.0 (1.4)	7.2 (1.1)	0.322
Midlands	454	28.0 (2.1)	16.9 (1.6)	11.1 (1.7)		558	21.6 (1.7)	13.0 (1.4)	8.6 (1.2)	
London	113	21.9 (5.1)	14.1 (4.0)	7.8 (3.6)		142	15.6 (3.5)	9.4 (2.8)	6.2 (2.5)	
South	433	25.4 (2.3)	14.0 (1.8)	11.4 (1.6)		551	18.1 (1.8)	11.3 (1.3)	6.8 (1.2)	
Smoking status:										
Never smoked	709	24.9 (1.8)	14.0 (1.4)	10.9 (1.3)	0.102	1083	19.1 (1.3)	11.5 (1.0)	7.6 (0.9)	0.290
Ex-regular	559	26.0 (1.9)	15.1 (1.5)	10.9 (1.2)		494	17.6 (1.6)	11.0 (1.3)	6.6 (1.1)	
Current smoker	217	32.9 (4.1)	17.1 (3.1)	15.8 (3.8)		230	23.0 (3.4)	14.9 (2.8)	8.1 (2.6)	
BMI:										
Normal	297	27.1 (3.2)	16.3 (2.4)	10.8 (2.4)	0.529	535	15.6 (1.7)	7.3 (1.1)	8.4 (1.4)	0.135
Overweight	658	24.0 (1.7)	13.6 (1.4)	10.4 (1.1)		565	20.3 (1.7)	13.0 (1.5)	7.4 (1.1)	
Obese	401	26.9 (2.2)	16.4 (1.8)	10.5 (1.7)		519	19.7 (1.9)	15.0 (1.7)	4.6 (1.1)	
Diagnosed diabetes:										
No	1294	24.2 (1.3)	13.7 (1.0)	10.6 (1.0)	<0.001	1652	18.4 (1.0)	11.0 (0.8)	7.4 (0.7)	0.005
Yes	191	40.4 (3.9)	26.2 (3.5)	14.2 (2.5)		154	28.8 (4.0)	21.2 (3.7)	7.6 (1.9)	
Raised Hb1Ac:										
No	981	23.6 (1.4)	13.1 (1.1)	10.6 (1.1)	<0.001	1189	17.9 (1.2)	10.7 (0.9)	7.2 (0.9)	0.025
Yes	140	39.8 (4.3)	25.5 (4.0)	14.3 (2.9)		114	27.1 (4.4)	17.0 (3.6)	10.1 (3.0)	
Hypertension:										
No	630	27.7 (2.0)	17.4 (1.7)	10.3 (1.6)	0.752	906	18.6 (1.6)	11.7 (1.3)	6.9 (1.1)	0.133
Yes	640	26.8 (1.9)	14.5 (1.5)	12.4 (1.3)		707	22.0 (1.6)	13.8 (1.3)	8.2 (1.0)	
Dyslipidaemia:										
No	483	29.7 (2.3)	17.0 (2.0)	12.7 (1.5)	0.031	389	22.0 (2.1)	13.5 (1.7)	8.5 (1.5)	0.098
Yes	637	23.2 (2.1)	13.2 (1.5)	10.0 (1.7)		915	17.8 (1.5)	10.9 (1.2)	6.8 (1.0)	

	n				n				
Physically inactive:										
No	838	24.1 (1.7)	14.3 (1.3)	9.9 (1.3)	0.180	875	16.0 (1.5)	10.8 (1.3)	5.2 (1.0)	0.028
Yes	437	27.7 (2.2)	16.0 (1.7)	11.7 (1.5)		649	20.9 (1.6)	13.4 (1.3)	7.4 (1.0)	

[*] Hearing loss: >35dBHL at 3.0 kHz (tone not heard at 35dBHL).

[†] Moderate loss: >35 to 54dBHL (tone not heard at 35dBHL, but heard at 55 and at 75dBHL).

[‡] Moderately severe or severe loss: >55 dBHL (tone not heard at 35 and at 55dBHL, but may or may not have heard the tone at 75dBHL).

[§] Prevalence of hearing loss (>35dBHL at 3.0 kHz in the better hearing ear) across the categories of each variable (region; smoking status; BMI; diagnosed diabetes; Hb1Ac; hypertension; dyslipidaemia; physical activity) were compared using the Chi-square (χ^2) tests. No adjustment to the p-values for multiple comparisons was made.

Supplementary Table 3   Age-standardized prevalence (%) and standard error (SE) of hearing aid use among persons with hearing loss, persons aged 45 years and over, HSE 2014

	Men			**Women**		
	N	**Hearing aid use % (SE)**	*P-value**	**N**	**Hearing aid use % (SE)**	*P-value**
Smoking status:						
Never smoked	182	35.3 (4.1)	0.452	202	32.7 (4.2)	0.849
Ex-regular	189	28.4 (3.8)		96	31.1 (5.9)	
Current smoker	54	27.5 (7.6)		46	27.4 (8.0)	
BMI:						
Normal	72	27.2 (6.7)	0.789	72	36.2 (8.1)	0.362
Overweight	181	30.7 (5.5)		112	23.5 (4.9)	
Obese	113	33.5 (5.5)		90	25.9 (6.0)	
Diagnosed diabetes:						
No	338	32.5 (3.6)	0.101	287	29.6 (3.8)	0.077
Yes	87	20.5 (5.6)		56	13.5 (6.4)	
Raised Hb1Ac:						
No	234	30.2 (4.0)	0.510	184	31.4 (4.5)	0.194
Yes	62	24.3 (7.5)		35	17.4 (8.3)	
Hypertension:						
No	159	30.7 (4.6)	0.761	113	30.1 (5.2)	0.803
Yes	223	28.7 (4.8)		201	28.4 (4.9)	
Dyslipidaemia:						
No	172	29.0 (4.8)	0.910	88	24.7 (7.6)	0.584
Yes	126	28.2 (5.2)		132	29.8 (4.9)	
Physically inactive:						
No	182	30.3 (4.5)	0.628	99	36.6 (5.6)	0.003
Yes	162	26.8 (5.4)		162	15.8 (3.9)	

* Prevalence of current hearing aid use across the categories of each variable (region; smoking status; BMI; diagnosed diabetes; Hb1Ac; hypertension; dyslipidaemia; physical activity) were compared using the Chi-square (χ^2) test. No adjustment to the p-values for multiple comparisons was made