

## Appendix 2. Logistic models for MIS and Open Hysterectomies

MIS Hysterectomy vs Open Hysterectomy				
Predictor	Univariate Models		Multivariate Model	
	OR (95% CI)	Pvalue	OR (95% CI)	Pvalue
<b>NHS Year of surgery</b>				
2011/12	Referent		Referent	
2012/13	1.3 (1.18 to 1.42)	<0.001	1.24 (1.13 to 1.37)	<0.001
2013/14	1.69 (1.54 to 1.85)	<0.001	1.61 (1.46 to 1.77)	<0.001
2014/15	2.13 (1.94 to 2.33)	<0.001	2.13 (1.94 to 2.35)	<0.001
2015/16	2.66 (2.43 to 2.93)	<0.001	2.67 (2.42 to 2.94)	<0.001
2016/17	3.25 (2.96 to 3.57)	<0.001	3.32 (3.01 to 3.67)	<0.001
2017/18*	4.22 (3.8 to 4.68)	<0.001	4.47 (4.01 to 4.99)	<0.001
<b>Age, years</b>				
<50	Referent		Referent	
50-59	1.31 (1.19 to 1.44)	<0.001	1.29 (1.17 to 1.43)	<0.001
60-69	1.43 (1.3 to 1.56)	<0.001	1.46 (1.33 to 1.61)	<0.001
70-79	1.41 (1.29 to 1.55)	<0.001	1.45 (1.31 to 1.6)	<0.001
80-89	1.23 (1.11 to 1.37)	<0.001	1.27 (1.13 to 1.42)	<0.001
>=90	0.87 (0.66 to 1.14)	0.306	0.93 (0.7 to 1.24)	0.632
<b>Ethnicity</b>				
White	Referent		Referent	
Asian	0.88 (0.78 to 0.99)	0.034	1 (0.88 to 1.15)	0.943
Black	0.46 (0.39 to 0.55)	<0.001	0.52 (0.43 to 0.62)	<0.001
Other	0.89 (0.84 to 0.95)	<0.001	0.83 (0.78 to 0.88)	<0.001
<b>Socio-Economic Group (IMD)</b>				
High	Referent		Referent	
Intermediate	0.95 (0.89 to 1.01)	0.08	0.95 (0.89 to 1.01)	0.112
Low	0.9 (0.85 to 0.96)	0.001	0.91 (0.86 to 0.97)	0.006
Very Low	0.82 (0.77 to 0.87)	<0.001	0.88 (0.82 to 0.94)	<0.001
<b>Charlson Comorbidity Group</b>				
0	Referent		Referent	
1	0.91 (0.46 to 1.81)	0.796	0.73 (0.34 to 1.55)	0.414
2	0.68 (0.34 to 1.34)	0.261	0.52 (0.25 to 1.12)	0.094
>=3	0.58 (0.29 to 1.14)	0.113	0.43 (0.2 to 0.91)	0.028
<b>Region</b>				
GLondon	Referent		Referent	
Yorks	1.11 (1.02 to 1.22)	0.022	0.96 (0.87 to 1.06)	0.426
WestMid	0.87 (0.8 to 0.95)	0.002	0.78 (0.71 to 0.86)	<0.001
SouthWest	1.56 (1.44 to 1.71)	<0.001	1.4 (1.28 to 1.54)	<0.001
SouthEast	1.1 (1.01 to 1.2)	0.029	0.97 (0.88 to 1.07)	0.54
NorthWest	0.87 (0.81 to 0.94)	0.001	0.77 (0.71 to 0.84)	<0.001
NorthEast	2.49 (2.2 to 2.81)	<0.001	2.33 (2.04 to 2.65)	<0.001
Hcounties	0.95 (0.85 to 1.05)	0.301	0.82 (0.73 to 0.92)	0.001
EastMid	1.26 (1.15 to 1.39)	<0.001	1.08 (0.97 to 1.2)	0.159
East	0.99 (0.9 to 1.08)	0.763	0.89 (0.81 to 0.98)	0.018
<b>Provider Volume</b>				
High	Referent		Referent	
Intermediate	0.96 (0.91 to 1)	0.057	0.92 (0.88 to 0.97)	0.002
Low	1.03 (0.86 to 1.24)	0.744	1.14 (0.94 to 1.39)	0.186
Very Low	0.42 (0.28 to 0.64)	<0.001	0.39 (0.25 to 0.61)	<0.001