

A. Appendix

Table A-1: Regression analyses on Reported Achievement, Population Achievement and % of Points Achieved across all 62 clinical indicators

	Reported Achievement		Population Achievement		Percentage of points scored	
	coeff (CI)	p-value	coeff (CI)	p-value	coeff (CI)	p-value
Clinical computer system*						
LV	- (-, -)	-	- (-, -)	-	- (-, -)	-
PCS	-0.72 (-0.84, -0.61)	<0.001	-0.76 (-0.89, -0.63)	<0.001	-0.40 (-0.55, -0.25)	<0.001
Practice Manager	0.42 (0.11, 0.73)	0.008	-0.33 (-0.66, 0.002)	0.052	-0.34 (-0.73, 0.05)	0.088
Premiere	0.38 (0.13, 0.64)	0.003	0.03 (-0.24, 0.30)	0.821	0.37 (0.05, 0.68)	0.022
ProdSysOneX	0.16 (0.03, 0.30)	0.020	-0.52 (-0.66, -0.38)	<0.001	-0.11 (-0.27, 0.05)	0.172
Synergy	0.42 (0.29, 0.54)	<0.001	0.54 (0.38, 0.69)	<0.001	0.38 (0.23, 0.53)	<0.001
Vision 3	0.72 (0.61, 0.83)	<0.001	0.35 (0.23, 0.47)	<0.001	0.10 (-0.04, 0.24)	0.151
year						
2007-8	- (-, -)	-	- (-, -)	-	- (-, -)	-
2008-9	0.03 (-0.07, 0.13)	0.527	0.42 (0.32, 0.52)	<0.001	0.27 (0.13, 0.40)	<0.001
2009-10	-0.22 (-0.33, -0.12)	<0.001	0.02 (-0.08, 0.12)	0.686	-0.24 (-0.38, -0.11)	0.001
2010-11	0.07 (-0.03, 0.17)	0.197	0.32 (0.22, 0.42)	<0.001	0.16 (0.02, 0.29)	0.022
List size (1000)	-0.11 (-0.12, -0.10)	<0.001	-0.14 (-0.15, -0.13)	<0.001	0.08 (0.07, 0.10)	<0.001
IMD 2010 [†]	-0.01 (-0.012, -0.007)	<0.001	-0.02 (-0.022, -0.016)	<0.001	-0.006 (-0.01, -0.002)	0.001
Non-urban practice [‡]	-0.11 (-0.21, -0.01)	0.032	0.04 (-0.07, 0.14)	0.496	-0.18 (-0.30, -0.06)	0.003
GP contract						
General Medical Services	-	-	-	-	-	-

	Reported Achievement		Population Achievement		Percentage of points scored	
	coeff (CI)	p-value	coeff (CI)	p-value	coeff (CI)	p-value
	(-, -)		(-, -)		(-, -)	
Personal Medical Services	0.17 (0.09,0.25)	<0.001	0.08 (-0.01,0.17)	0.072	0.23 (0.12,0.34)	<0.001
Alternative Provider Medical Services	-0.73 (-1.18,-0.29)	0.001	-2.20 (-2.63,-1.76)	<0.001	-2.99 (-3.71,-2.27)	<0.001
Primary Care Trust Medical Services	-1.52 (-2.03,-1.00)	<0.001	-2.38 (-2.89,-1.87)	<0.001	-2.83 (-3.74,-1.91)	<0.001
Practice % female patients	0.09 (0.06,0.12)	<0.001	0.08 (0.05,0.11)	<0.001	0.24 (0.18,0.29)	<0.001
Practice % patients 65 or over	-0.03 (-0.04,-0.02)	<0.001	0.02 (0.01,0.03)	<0.001	0.04 (0.03,0.06)	<0.001
Practice mean General Practitioner (GP) age	-0.016 (-0.024,-0.008)	<0.001	-0.013 (-0.021,-0.005)	0.001	-0.07 (-0.08,-0.05)	<0.001
Practice % female GPs	0.006 (0.004,0.008)	<0.001	0.006 (0.004,0.008)	<0.001	0.009 (0.006,0.011)	<0.001
Practice % of GPs qualified in the UK	0.002 (0.00002,0.003)	0.047	-0.001 (-0.003,0.0004)	0.139	0.002 (-0.0001,0.005)	0.056
Practice % of GP providers§	0.006 (0.004,0.008)	<0.001	0.010 (0.008,0.012)	<0.001	0.011 (0.008,0.014)	<0.001

* Overall, statistically significant differences between clinical systems were observed within each indicator group for each of the regressions ($p < 0.001$ in all three χ^2 tests).

† Index of Multiple Deprivation at the Lower Super Output Area level

‡ Area classed as urban if population at the Middle Super Output Area level is 10,000 or more. Non-urban areas cover towns, fringes, villages, hamlets and isolated dwellings.

§ General practitioners that has had at least 5 years in training as a foundation doctors and specialty registrars

Table A-2: Regression analyses on Reported Achievement, Population Achievement and % of Points Achieved across measurement, treatment and outcome indicators (35, 16 and 11 respectively)*

	Reported Achievement		Population Achievement		Percentage of points Achieved	
	coeff (CI)	p-value	coeff (CI)	p-value	coeff (CI)	p-value
Indicator category						
Measurement	- (-,-)	-	- (-,-)	-	- (-,-)	-
Treatment	-2.57 (-2.65,-2.50)	<0.001	-9.40 (-9.48,-9.32)	<0.001	1.02 (0.91,1.13)	<0.001
Outcome	-13.44 (-13.53,-13.35)	<0.001	-16.05 (-16.15,-15.96)	<0.001	0.39 (0.28,0.50)	<0.001
Clinical computer system[†]						
LV	- (-,-)	-	- (-,-)	-	- (-,-)	-
PCS	-0.65 (-0.77,-0.53)	<0.001	-0.81 (-0.93,-0.68)	<0.001	-0.48 (-0.65,-0.32)	<0.001
Practice Manager	0.17 (-0.11,0.44)	0.231	-0.33 (-0.63,-0.02)	0.036	-0.53 (-0.93,-0.13)	0.010
Premiere	0.29 (0.06,0.52)	0.015	0.03 (-0.22,0.28)	0.815	0.39 (0.04,0.74)	0.029
ProdSysOneX	-0.06 (-0.17,0.06)	0.354	-0.66 (-0.80,-0.53)	<0.001	-0.14 (-0.32,0.04)	0.122
Synergy	0.43 (0.31,0.56)	<0.001	0.51 (0.36,0.66)	<0.001	0.64 (0.41,0.87)	<0.001
Vision 3	0.51 (0.41,0.62)	<0.001	0.26 (0.14,0.38)	<0.001	-0.09 (-0.24,0.06)	0.239
Indicator category by Clinical computer system (interactions)^{†‡}						
Measurement × LV	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × PCS	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × Practice Manager	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × Premiere	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × ProdSysOneX	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × Synergy	- (-,-)	-	- (-,-)	-	- (-,-)	-
Measurement × Vision 3	- (-,-)	-	- (-,-)	-	- (-,-)	-
Treatment × LV	- (-,-)	-	- (-,-)	-	- (-,-)	-

	Reported Achievement		Population Achievement		Percentage of points Achieved	
	coeff (CI)	p-value	coeff (CI)	p-value	coeff (CI)	p-value
Treatment × PCS	-0.33 (-0.50,-0.16)	<0.001	0.25 (0.06,0.43)	0.008	0.10 (-0.12,0.32)	0.362
Treatment × Practice Manager	-0.35 (-0.73,0.03)	0.071	-0.63 (-1.02,-0.24)	0.001	-0.36 (-0.89,0.17)	0.183
Treatment × Premiere	-0.87 (-1.23,-0.51)	<0.001	-0.85 (-1.22,-0.48)	<0.001	-0.33 (-0.82,0.15)	0.178
Treatment × ProdSysOneX	0.09 (-0.08,0.26)	0.299	0.15 (-0.03,0.32)	0.101	-0.17 (-0.41,0.06)	0.147
Treatment × Synergy	-0.64 (-0.83,-0.45)	<0.001	-0.60 (-0.81,-0.38)	<0.001	-0.59 (-0.91,-0.26)	<0.001
Treatment × Vision 3	-0.28 (-0.44,-0.12)	<0.001	-0.30 (-0.46,-0.13)	<0.001	-0.03 (-0.23,0.17)	0.780
Outcome × LV	- (-, -)	-	- (-, -)	-	- (-, -)	-
Outcome × PCS	-0.21 (-0.41,-0.01)	0.040	-0.16 (-0.38,0.05)	0.131	0.12 (-0.10,0.34)	0.281
Outcome × Practice Manager	1.66 (1.22,2.10)	<0.001	1.06 (0.61,1.51)	<0.001	0.99 (0.46,1.52)	<0.001
Outcome × Premiere	0.91 (0.49,1.33)	<0.001	0.58 (0.14,1.01)	0.009	0.13 (-0.36,0.61)	0.614
Outcome × ProdSysOneX	0.84 (0.64,1.03)	<0.001	0.40 (0.18,0.61)	<0.001	0.19 (-0.05,0.42)	0.115
Outcome × Synergy	0.45 (0.22,0.68)	<0.001	0.60 (0.33,0.86)	<0.001	-0.35 (-0.67,-0.03)	0.033
Outcome × Vision 3	0.99 (0.81,1.16)	<0.001	0.71 (0.52,0.89)	<0.001	0.65 (0.45,0.85)	<0.001
year						
2007-8	- (-, -)	-	- (-, -)	-	- (-, -)	-
2008-9	0.12 (0.05,0.19)	0.001	0.58 (0.50,0.66)	<0.001	0.26 (0.18,0.35)	<0.001
2009-10	-0.26 (-0.33,-0.19)	<0.001	0.04 (-0.03,0.12)	0.278	-0.38 (-0.46,-0.29)	<0.001
2010-11	0.001 (-0.07,0.07)	0.976	0.29 (0.21,0.37)	<0.001	0.03 (-0.06,0.11)	0.494
List size (1000)	-0.13 (-0.14,-0.12)	<0.001	-0.15 (-0.16,-0.14)	<0.001	0.07 (0.06,0.08)	<0.001
IMD 2010 [§]	-0.01 (-0.012,-0.008)	<0.001	-0.017 (-0.019,-0.015)	<0.001	-0.006 (-0.008,-0.003)	<0.001

	Reported Achievement		Population Achievement		Percentage of points Achieved	
	coeff (CI)	p-value	coeff (CI)	p-value	coeff (CI)	p-value
Non-urban practice [¶]	-0.14 (-0.21,-0.08)	<0.001	-0.04 (-0.11,0.04)	0.346	-0.18 (-0.28,-0.08)	0.001
GP contract						
General Medical Services	- (-, -)	-	- (-, -)	-	- (-, -)	-
Personal Medical Services	0.19 (0.13,0.24)	<0.001	0.08 (0.02,0.14)	0.015	0.23 (0.16,0.30)	<0.001
Alternative Provider Medical Services	-0.63 (-0.93,-0.34)	<0.001	-2.30 (-2.59,-2.01)	<0.001	-2.70 (-2.96,-2.44)	<0.001
Primary Care Trust Medical Services	-1.46 (-1.82,-1.11)	<0.001	-2.38 (-2.73,-2.03)	<0.001	-2.51 (-2.85,-2.17)	<0.001
Practice % female patients	0.10 (0.08,0.12)	<0.001	0.07 (0.04,0.09)	<0.001	0.23 (0.22,0.25)	<0.001
Practice % patients 65 or over	-0.023 (-0.029,-0.016)	<0.001	0.052 (0.045,0.059)	<0.001	0.05 (0.04,0.06)	<0.001
Practice mean General Practitioner (GP) age	-0.014 (-0.020,-0.009)	<0.001	-0.014 (-0.020,-0.009)	<0.001	-0.061 (-0.067,-0.056)	<0.001
Practice % female GPs	0.006 (0.005,0.007)	<0.001	0.005 (0.004,0.007)	<0.001	0.008 (0.007,0.010)	<0.001
Practice % of GPs qualified in the UK	0.001 (0.0002,0.002)	0.018	-0.001 (-0.002,-0.0003)	0.015	0.002 (0.001,0.003)	0.004
Practice % of GP providers ^{¶¶}	0.007 (0.006,0.008)	<0.001	0.011 (0.009,0.012)	<0.001	0.01 (0.009,0.012)	<0.001

*Note that due to the modelled interaction all reported main effects relate to the measurement indicator group only, i.e. the comparison group (except for the indicator category effect)

† Overall, statistically significant differences between clinical systems were observed within each indicator group for each of the regressions (p<0.001 in all 9 chi² tests)

‡ The coefficients for the interactions represent the changes in the treatment and outcome indicator group, for each clinical system, compared to the measurement indicator group

§ Index of Multiple Deprivation at the Lower Super Output Area level

¶ Area classed as urban if population at the Middle Super Output Area level is 10,000 or more. Non-urban areas cover towns, fringes, villages, hamlets and isolated dwellings.

¶¶ General practitioners that has had at least 5 years in training as a foundation doctors and specialty registrars

Table A-3: Pairwise comparisons on Reported Achievement levels across systems, using predictions from regression models, with confidence intervals adjusted using Scheffe’s method for multiple comparisons

<i>Overall (62 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Vision 3	Practice Manager	Synergy	Premiere	ProdSysOneX	LV	PCS
Vision 3	1	90.12 (90.03,90.21)	-						
Practice Manager	2	89.82 (89.52,90.13)	0.30 (-0.27,0.87)	-					
Synergy	3	89.82 (89.70,89.94)	0.30 (0.04,0.57)	0.005 (-0.59,0.60)	-				
Premiere	4	89.79 (89.54,90.04)	0.33 (-0.14,0.81)	0.04 (-0.67,0.74)	0.03 (-0.47,0.53)	-			
ProdSysOneX	5	89.57 (89.44,89.69)	0.55 (0.27,0.84)	0.26 (-0.34,0.85)	0.25 (-0.06,0.57)	0.22 (-0.28,0.72)	-		
LV	6	89.40 (89.35,89.46)	0.72 (0.52,0.92)	0.42 (-0.14,0.98)	0.42 (0.18,0.65)	0.38 (-0.07,0.84)	0.16 (-0.09,0.42)	-	
PCS	7	88.68 (88.58,88.78)	1.44 (1.20,1.69)	1.14 (0.57,1.71)	1.14 (0.86,1.42)	1.11 (0.63,1.59)	0.89 (0.59,1.19)	0.72 (0.52,0.93)	-
<i>Measurement (35 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Vision 3	Synergy	Premiere	Practice Manager	LV	ProdSysOneX	PCS
Vision 3	1	93.48 (93.40,93.57)	-						
Synergy	2	93.40 (93.29,93.52)	0.08 (-0.33,0.49)	-					
Premiere	3	93.26 (93.03,93.48)	0.23 (-0.47,0.92)	0.15 (-0.57,0.86)	-				
Practice Manager	4	93.14 (92.87,93.41)	0.35 (-0.48,1.17)	0.27 (-0.58,1.11)	0.12 (-0.86,1.10)	-			
LV	5	92.97 (92.92,93.02)	0.51 (0.23,0.80)	0.43 (0.08,0.79)	0.29 (-0.38,0.95)	0.17 (-0.62,0.95)	-		

ProdSysOneX	6	92.91 (92.81,93.02)	0.57 (0.16,0.98)	0.49 (0.04,0.94)	0.34 (-0.38,1.06)	0.22 (-0.61,1.06)	0.06 (-0.28,0.39)	-	
PCS	7	92.32 (92.21,92.43)	1.16 (0.78,1.55)	1.08 (0.63,1.53)	0.94 (0.22,1.65)	0.82 (-0.02,1.65)	0.65 (0.31,0.98)	0.59 (0.15,1.03)	-
<i>Treatment (11 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Vision 3	ProdSysOneX	LV	Practice Manager	Synergy	Premiere	PCS
Vision 3	1	90.63 (90.53,90.74)	-						
ProdSysOneX	2	90.43 (90.31,90.56)	0.20 (-0.27,0.67)	-					
LV	3	90.40 (90.34,90.46)	0.23 (-0.11,0.58)	0.03 (-0.37,0.44)	-				
Practice Manager	4	90.22 (89.91,90.52)	0.41 (-0.50,1.33)	0.22 (-0.74,1.17)	0.18 (-0.71,1.07)	-			
Synergy	5	90.19 (90.06,90.33)	0.44 (-0.04,0.92)	0.24 (-0.27,0.76)	0.21 (-0.20,0.61)	0.03 (-0.92,0.97)	-		
Premiere	6	89.82 (89.54,90.09)	0.81 (-0.02,1.65)	0.62 (-0.25,1.48)	0.58 (-0.22,1.38)	0.40 (-0.78,1.58)	0.37 (-0.50,1.24)	-	
PCS	7	89.42 (89.30,89.54)	1.21 (0.76,1.67)	1.01 (0.51,1.51)	0.98 (0.60,1.36)	0.80 (-0.13,1.73)	0.77 (0.25,1.29)	0.40 (-0.44,1.24)	-
<i>Outcome (16 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Practice Manager	Vision 3	Premiere	Synergy	ProdSysOneX	LV	PCS
Practice Manager	1	81.36 (80.99,81.74)	-						
Vision 3	2	81.03 (80.91,81.15)	0.33 (-0.80,1.47)	-					
Premiere	3	80.73 (80.37,81.08)	0.64 (-0.81,2.08)	0.30 (-0.79,1.40)	-				
Synergy	4	80.41 (80.23,80.59)	0.95 (-0.23,2.13)	0.62 (-0.01,1.25)	0.32 (-0.80,1.44)	-			
ProdSysOneX	5	80.31	1.05	0.72	0.42	0.10	-		

		(80.15,80.46)	(-0.14,2.25)	(0.15,1.29)	(-0.67,1.50)	(-0.59,0.79)			
LV	6	79.53 (79.46,79.60)	1.83 (0.74,2.92)	1.50 (1.09,1.91)	1.20 (0.17,2.23)	0.88 (0.33,1.43)	0.78 (0.29,1.27)	-	
PCS	7	78.67 (78.52,78.82)	2.69 (1.52,3.86)	2.36 (1.80,2.91)	2.05 (0.98,3.13)	1.74 (1.06,2.41)	1.63 (1.02,2.25)	0.86 (0.39,1.32)	-

Table A-4: Pairwise comparisons on Population Achievement levels across systems, using predictions from regression models, with confidence intervals adjusted using Scheffe's method for multiple comparisons

<i>Overall (62 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Synergy	Vision 3	Premiere	LV	Practice Manager	ProdSysOneX	PCS
Synergy	1	85.57 (85.43,85.72)	-						
Vision 3	2	85.39 (85.29,85.49)	0.19 (-0.11,0.49)	-					
Premiere	3	85.07 (84.81,85.33)	0.50 (-0.03,1.04)	0.32 (-0.19,0.83)	-				
LV	4	85.04 (84.98,85.10)	0.54 (0.26,0.81)	0.35 (0.14,0.56)	0.03 (-0.45,0.52)	-			
Practice Manager	5	84.71 (84.38,85.03)	0.86 (0.23,1.50)	0.68 (0.07,1.29)	0.36 (-0.38,1.10)	0.33 (-0.27,0.93)	-		
ProdSysOneX	6	84.52 (84.40,84.64)	1.05 (0.71,1.40)	0.87 (0.57,1.16)	0.55 (0.04,1.06)	0.52 (0.26,0.77)	0.19 (-0.44,0.82)	-	
PCS	7	84.28 (84.17,84.39)	1.30 (0.98,1.61)	1.11 (0.84,1.38)	0.79 (0.29,1.29)	0.76 (0.53,0.99)	0.43 (-0.19,1.05)	0.24 (-0.06,0.55)	-
<i>Measurement (35 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Synergy	Vision 3	Premiere	LV	Practice Manager	ProdSysOneX	PCS
Synergy	1	90.87 (90.74,91.01)	-						
Vision 3	2	90.62 (90.52,90.72)	0.25 (-0.23,0.73)	-					
Premiere	3	90.39 (90.15,90.64)	0.48 (-0.31,1.27)	0.23 (-0.51,0.96)	-				
LV	4	90.36 (90.30,90.42)	0.51 (0.09,0.93)	0.26 (-0.08,0.60)	0.03 (-0.69,0.75)	-			
Practice Manager	5	90.04 (89.74,90.34)	0.84 (-0.10,1.77)	0.58 (-0.32,1.48)	0.36 (-0.74,1.46)	0.33 (-0.55,1.20)	-		

ProdSysOneX	6	89.70 (89.58,89.82)	1.17 (0.65,1.69)	0.92 (0.47,1.37)	0.69 (-0.07,1.46)	0.66 (0.28,1.04)	0.33 (-0.61,1.27)	-	
PCS	7	89.56 (89.45,89.67)	1.31 (0.83,1.80)	1.06 (0.64,1.48)	0.84 (0.10,1.57)	0.81 (0.45,1.16)	0.48 (-0.44,1.39)	0.14 (-0.33,0.62)	-

Treatment (11 indicators)

Product	rank	Predictions (CI)	Pairwise comparisons						
			LV	Vision 3	Synergy	ProdSysOneX	PCS	Premiere	Practice Manager
LV	1	80.96 (80.90,81.03)	-						
Vision 3	2	80.92 (80.82,81.03)	0.04 (-0.31,0.39)	-					
Synergy	3	80.88 (80.72,81.03)	0.09 (-0.39,0.56)	0.05 (-0.48,0.57)	-				
ProdSysOneX	4	80.45 (80.33,80.57)	0.51 (0.10,0.92)	0.48 (0.00,0.95)	0.43 (-0.13,0.99)	-			
PCS	5	80.41 (80.28,80.53)	0.56 (0.18,0.94)	0.52 (0.06,0.98)	0.47 (-0.08,1.02)	0.04 (-0.45,0.54)	-		
Premiere	6	80.14 (79.86,80.42)	0.82 (0.00,1.64)	0.78 (-0.07,1.64)	0.73 (-0.17,1.64)	0.31 (-0.57,1.18)	0.26 (-0.62,1.14)	-	
Practice Manager	7	80.01 (79.69,80.32)	0.96 (0.05,1.86)	0.92 (-0.03,1.86)	0.87 (-0.14,1.88)	0.44 (-0.52,1.41)	0.40 (-0.55,1.35)	0.14 (-1.05,1.32)	-

Outcome (16 indicators)

Product	rank	Predictions (CI)	Pairwise comparisons						
			Synergy	Vision 3	Practice Manager	Premiere	LV	ProdSysOneX	PCS
Synergy	1	75.42 (75.21,75.63)	-						
Vision 3	2	75.28 (75.15,75.41)	0.14 (-0.54,0.83)	-					
Practice Manager	3	75.04 (74.64,75.44)	0.37 (-0.90,1.65)	0.23 (-0.97,1.43)	-				
Premiere	4	74.92 (74.57,75.28)	0.50 (-0.69,1.69)	0.35 (-0.73,1.44)	0.12 (-1.43,1.68)	-			
LV	5	74.31	1.10	0.96	0.73	0.61	-		

		(74.23,74.39)	(0.47,1.74)	(0.53,1.40)	(-0.43,1.89)	(-0.44,1.66)			
ProdSysOneX	6	74.05 (73.88,74.22)	1.37 (0.57,2.17)	1.23 (0.61,1.84)	1.00 (-0.24,2.23)	0.87 (-0.27,2.02)	0.27 (-0.27,0.80)	-	
PCS	7	73.34 (73.19,73.50)	2.07 (1.32,2.82)	1.93 (1.35,2.51)	1.70 (0.48,2.92)	1.58 (0.48,2.67)	0.97 (0.47,1.47)	0.70 (0.06,1.35)	-

Table A-5: Pairwise comparisons on % of Points Achieved across systems, using predictions from regression models, with confidence intervals adjusted using Scheffe's method for multiple comparisons

<i>Overall (62 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Synergy	Premiere	Vision 3	LV	ProdSysOneX	Practice Manager	PCS
Synergy	1	98.08 (97.93,98.23)	-						
Premiere	2	98.07 (97.75,98.38)	0.01 (-0.61,0.63)	-					
Vision 3	3	97.81 (97.69,97.92)	0.27 (-0.05,0.60)	0.26 (-0.35,0.87)	-				
LV	4	97.70 (97.63,97.77)	0.38 (0.11,0.65)	0.37 (-0.20,0.93)	0.10 (-0.15,0.36)	-			
ProdSysOneX	5	97.59 (97.45,97.73)	0.49 (0.14,0.84)	0.48 (-0.14,1.09)	0.21 (-0.12,0.55)	0.11 (-0.18,0.40)	-		
Practice Manager	6	97.36 (96.98,97.75)	0.72 (-0.02,1.45)	0.70 (-0.18,1.59)	0.44 (-0.28,1.17)	0.34 (-0.36,1.04)	0.23 (-0.50,0.96)	-	
PCS	7	97.30 (97.17,97.44)	0.78 (0.42,1.13)	0.77 (0.15,1.38)	0.50 (0.18,0.83)	0.40 (0.13,0.67)	0.29 (-0.07,0.65)	0.06 (-0.67,0.79)	-
<i>Measurement (35 indicators)</i>									
Product	rank	Predictions (CI)	Pairwise comparisons						
			Synergy	Premiere	LV	Vision 3	ProdSysOneX	PCS	Practice Manager
Synergy	1	98.00 (97.70,98.31)	-						
Premiere	2	97.75 (97.35,98.15)	0.25 (-0.90,1.40)	-					
LV	3	97.36 (97.14,97.59)	0.64 (-0.02,1.30)	0.39 (-0.61,1.38)	-				

Vision 3	4	97.27 (97.03,97.52)	0.73 (0.01,1.44)	0.48 (-0.55,1.51)	0.09 (-0.33,0.51)	-				
ProdSysOneX	5	97.22 (96.96,97.49)	0.78 (0.01,1.55)	0.53 (-0.54,1.60)	0.14 (-0.37,0.65)	0.05 (-0.53,0.64)	-			
PCS	6	96.88 (96.62,97.13)	1.12 (0.38,1.86)	0.87 (-0.18,1.92)	0.48 (0.02,0.95)	0.40 (-0.14,0.93)	0.34 (-0.27,0.95)	-		
Practice Manager	7	96.83 (96.39,97.28)	1.17 (-0.12,2.45)	0.92 (-0.57,2.41)	0.53 (-0.62,1.68)	0.44 (-0.74,1.62)	0.39 (-0.83,1.61)	0.05 (-1.15,1.24)	-	
<i>Treatment (11 indicators)</i>										
			Pairwise comparisons							
Product	rank	Predictions (CI)	Premiere	Synergy	LV	Vision 3	ProdSysOneX	PCS	Practice Manager	
Premiere	1	98.44 (98.04,98.84)	-							
Synergy	2	98.44 (98.14,98.74)	-0.002 (-1.152,1.49)	-						
LV	3	98.39 (98.16,98.62)	0.05 (-0.94,1.05)	0.05 (-0.61,0.71)	-					
Vision 3	4	98.27 (98.02,98.52)	0.17 (-0.86,1.20)	0.17 (-0.55,0.89)	0.12 (-0.31,0.54)	-				
ProdSysOneX	5	98.07 (97.81,98.34)	0.37 (-0.71,1.44)	0.37 (-0.41,1.14)	0.31 (-0.20,0.83)	0.20 (-0.39,0.78)	-			
PCS	6	98.01 (97.75,98.26)	0.44 (-0.61,1.48)	0.43 (-0.31,1.17)	0.38 (-0.08,0.84)	0.26 (-0.27,0.80)	0.07 (-0.54,0.68)	-		
Practice Manager	7	97.50 (97.05,97.95)	0.94 (-0.54,2.43)	0.94 (-0.34,2.23)	0.89 (-0.26,2.04)	0.77 (-0.41,1.95)	0.58 (-0.65,1.80)	0.51 (-0.69,1.71)	-	
<i>Outcome (16 indicators)</i>										
			Pairwise comparisons							
Product	rank	Predictions (CI)	Vision 3	Premiere	Practice Manager	Synergy	ProdSysOneX	LV	PCS	
Vision 3	1	98.32	-							

		(98.07,98.57)							
Premiere	2	98.27 (97.87,98.67)	0.05 (-0.98,1.08)	-					
Practice Manager	3	98.21 (97.77,98.66)	0.10 (-1.08,1.29)	0.06 (-1.43,1.54)	-				
Synergy	4	98.04 (97.74,98.35)	0.27 (-0.44,0.99)	0.23 (-0.93,1.38)	0.17 (-1.11,1.45)	-			
ProdSysOneX	5	97.80 (97.54,98.07)	0.52 (-0.07,1.10)	0.47 (-0.61,1.54)	0.41 (-0.81,1.63)	0.24 (-0.53,1.01)	-		
LV	6	97.76 (97.53,97.98)	0.56 (0.14,0.98)	0.51 (-0.48,1.51)	0.46 (-0.69,1.61)	0.29 (-0.37,0.95)	0.05 (-0.47,0.56)	-	
PCS	7	97.39 (97.14,97.65)	0.92 (0.39,1.46)	0.88 (-0.17,1.92)	0.82 (-0.38,2.02)	0.65 (-0.09,1.39)	0.41 (-0.20,1.02)	0.36 (-0.10,0.82)	-

Table A-6: Quality and Outcomes Framework indicators included in the main analysis

Indicator	Min Threshold	Max Threshold	Points	Description	Type of indicator
AF 4	40	90	10	Diagnosis confirmed by ECG or specialist	Measurement
AF 3	40	90	15	Treated with anti-coagulation/anti-platelet	Treatment
ASTHMA 8	40	80	15	Variability/reversibility measured	Measurement
ASTHMA 3	40	80	6	Smoking status recorded (ages 14-19)	Measurement
ASTHMA 6	40	70	20	Care reviewed	Measurement
BP 4	40	90	20	Blood pressure measured	Measurement
BP 5	40	70	57	Last blood pressure \leq 150/90 mmHg	Outcome
CANCER 3	40	90	6	Care reviewed	Measurement
CHD 2	40	90	7	Referred for exercise testing/specialist assessment	Measurement
CHD 5	40	90	7	Blood pressure measured	Measurement
CHD 6	40	70	19	Blood pressure \leq 150/90 mmHg	Outcome
CHD 7	40	90	7	Total cholesterol measured	Measurement
CHD 8	40	70	17	Total cholesterol \leq 5 mmol/l	Outcome
CHD 9	40	90	7	Treated with aspirin/anti-platelet/anti-coagulant	Treatment
CHD 10	40	60	7	Treated with beta blocker	Treatment
CHD 11	40	80	7	Treated with ACE-inhibitor (history of myocardial infarction)	Treatment
CHD 12	40	90	7	Influenza vaccination	Treatment
HF 2	40	90	6	Diagnosis confirmed by echocardiogram/specialist	Measurement

HF 3	40	80	10	Treated with ACE inhibitor/angiotensin receptor blocker	Treatment
CKD 2	40	90	6	Blood pressure measured	Measurement
CKD 3	40	70	11	Blood pressure $\leq 140/85$ mmHg	Outcome
CKD 5	40	80	4	Treated with ACE inhibitor/angiotensin receptor blocker (hypertension and proteinuria)	Treatment
COPD 12	40	80	5	Diagnosis confirmed by post bronchodilator spirometry	Measurement
COPD 10	40	70	7	FeV1 measured	Measurement
COPD 11/13	40	90	7/9	Care reviewed	Treatment
COPD 8	40	85	6	Influenza vaccination	Treatment
DEM 2	25	60	15	Care reviewed	Measurement
DEP 1	40	90	8/6	Case finding on Diabetes and CHD register	Measurement
DEP 2	40	90	25	Severity assessed (start of treatment)	Measurement
DM 2	40	90	3	BMI measured	Measurement
DM 5	40	90	3	HbA1c measured	Measurement
DM20/23	40	50	17	HbA1c $\leq 7/7.5\%$	Outcome
DM 7/25	40	90	11	HbA1c $\leq 10/9\%$	Outcome
DM 21	40	90	5	Retinal screening	Measurement
DM 9	40	90	3	Peripheral pulses assessed	Measurement
DM 10	40	90	3	Neuropathy testing	Measurement
DM 11	40	90	3	Blood pressure measured	Measurement
DM 12	40	60	18	Blood pressure $\leq 145/85$ mmHg	Outcome
DM 13	40	90	3	Micro-albuminuria testing	Measurement

DM 22	40	90	3	Glomerular filtration rate/serum creatinine measured	Measurement
DM 15	40	80	3	Treated with ACE inhibitors/A2 antagonists (proteinuria or micro-albuminuria)	Treatment
DM 16	40	90	3	Total cholesterol measured	Measurement
DM 17	40	70	6	Total cholesterol \leq 5 mmol/l	Outcome
DM 18	40	85	3	Influenza vaccination	Treatment
EPILEPSY 6	40	90	4	Seizure frequency measured	Measurement
EPILEPSY 7	40	90	4	Medication reviewed (ages 18 and over)	Measurement
EPILEPSY 8	40	70	6	Seizure free for last 12 months (ages 18 and over)	Outcome
MH 9	40	90	23	Care reviewed	Measurement
MH 4	40	90	1	Serum creatinine and TSH measured (on lithium)	Measurement
MH 5	40	90	2	Lithium levels in the therapeutic range (on lithium)	Treatment
MH 6	25	50	6	Care plan documented	Treatment
MH 7	40	90	3	Followed up within 14 days (non-attenders)	Measurement
SMOKING 3	40	90	33	Smoking status recorded	Measurement
SMOKING 4	40	90	35	Smoking cessation advice/intervention offered (smokers)	Treatment
STROKE 13	40	80	2	Referred for further investigation	Measurement
STROKE 5	40	90	2	Blood pressure measured	Measurement
STROKE 6	40	70	5	Blood pressure \leq 150/90 mmHg	Outcome

STROKE 7	40	90	2	Total cholesterol measured	Measurement
STROKE 8	40	60	5	Total cholesterol ≤ 5 mmol/l	Outcome
STROKE 12	40	90	4	Treated with anti-platelet/anti-coagulant (non-haemorrhagic)	Treatment
STROKE 10	40	85	2	Influenza vaccination	Treatment
THYROID 2	40	90	6	Thyroid function measured	Measurement

Figure A-1

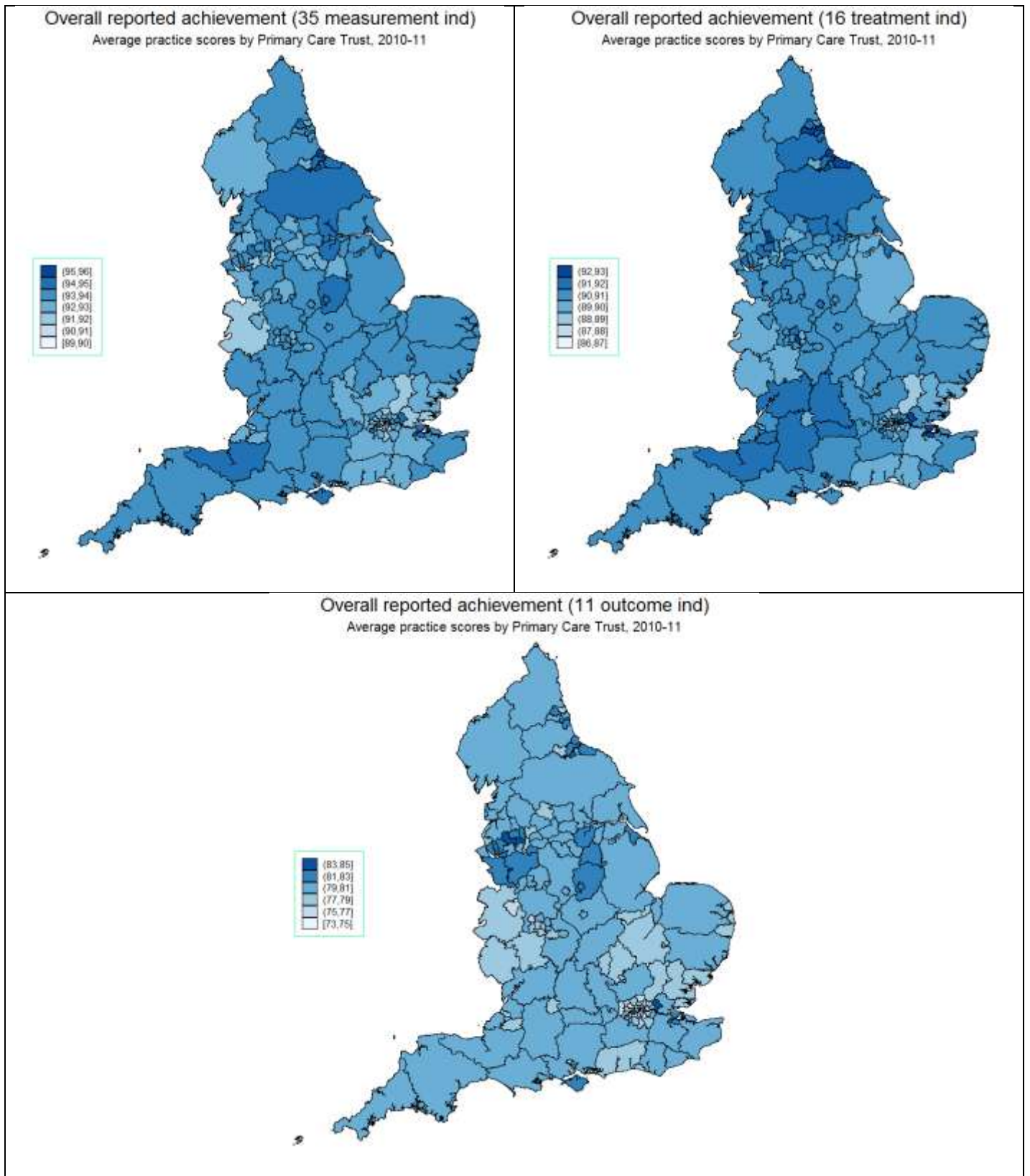


Figure A-2

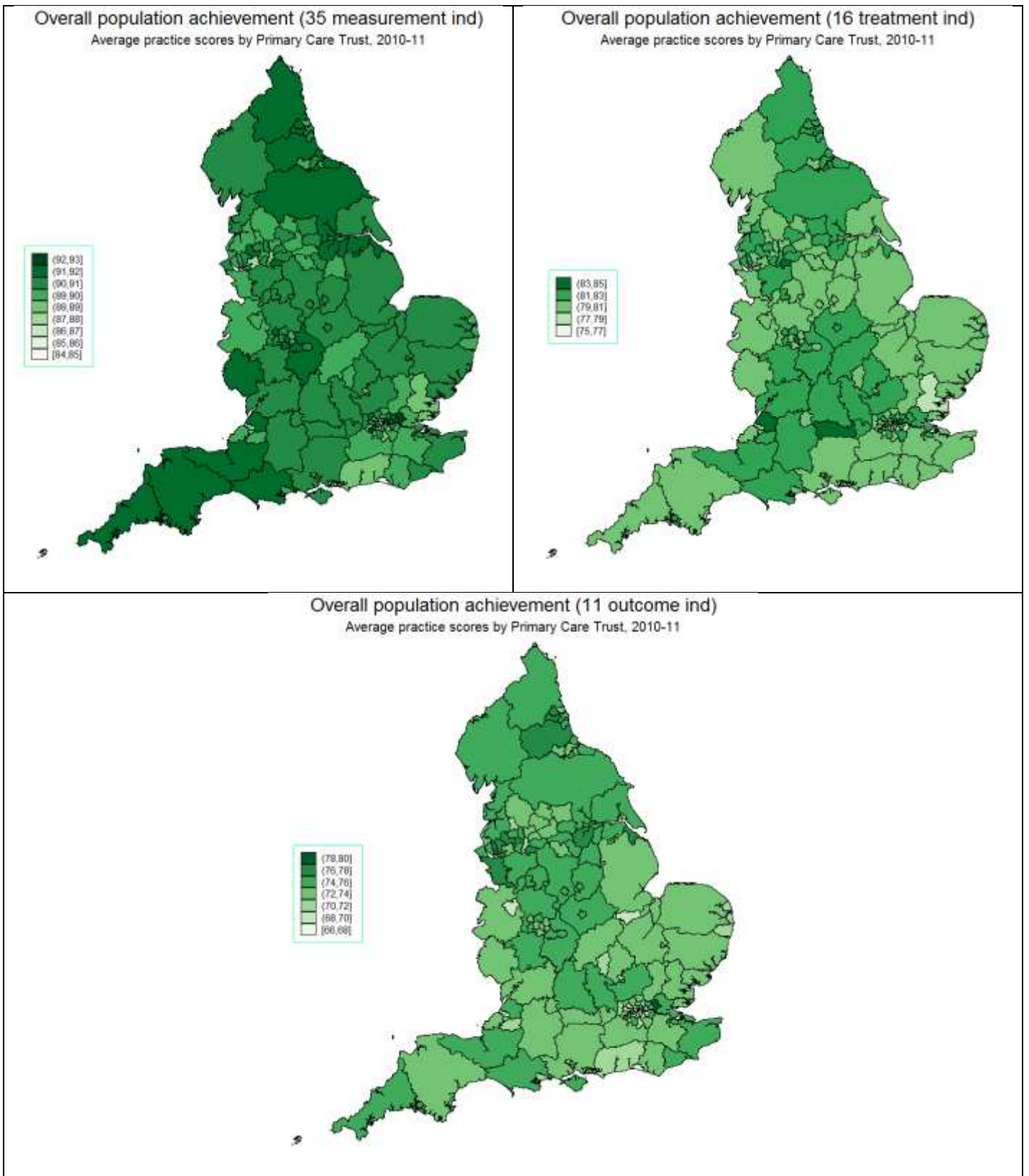


Figure A-3

